

Zool  
Reptilia  
B

Natural History Museum (British Museum) Dept. of Zoology

# CATALOGUE

OF THE

# SNAKES

IN THE

BRITISH MUSEUM  
(NATURAL HISTORY).

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## VOLUME I.,

CONTAINING THE FAMILIES

TYPHLOPIDÆ, GLAUCONIIDÆ, BOIDÆ, ILYSIIDÆ, UROPELTIDÆ,  
XENOPELTIDÆ, AND COLUBRIDÆ AGLYPHÆ, PART.

BY

GEORGE ALBERT BOULENGER.

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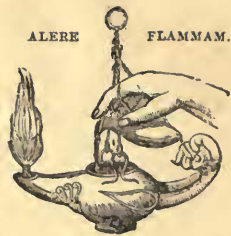
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## PREFACE.

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THE Collection of Snakes in the British Museum was catalogued partly in the year 1849, partly in 1858, in two 12mo volumes of respectively 125 and 281 pages. It contained at that time about 500 species represented by 3500 specimens, and ranked as one of the two richest collections of Ophidians. However, the appearance of those two little Catalogues led to the very fertile cooperation of many Naturalists and Collectors in the Tropics; and the influx of additional species was so continuous as to necessitate the issue of supplementary reports, which were published in the 'Annals and Magazine of Natural History' and in the 'Proceedings of the Zoological Society,' and continued with tolerable regularity to the year 1872. By that time the total number of species in the Museum amounted to 920, and that of the typical specimens to 360. Although no opportunity of adding to the Collection has been lost since that year, the high percentage of the new species acquired in former years could no longer be maintained.

Until the completion of the work, which will consist of three volumes, it is not possible to give more than an approximate estimate of the extent of the Collection at the present date. To judge from this first volume, the entire Collection will probably be found to contain not less than 1200 species represented by about 10,000 specimens.

The present edition of the Catalogue has much stronger claims to being regarded as a Monograph of the suborder *Ophidia* than its predecessor, in which little or no reference was made to species not represented in the Museum. The principles on which

Schlegel had built up his classification are now entirely abandoned, and the taxonomic value of the dental is made subordinate to that of osteological characters. The specific descriptions and the references to the literature are given much more fully; and the re-examination of the specimens has led to numerous changes in the nomenclature and the limitation of species and genera, though, in this respect, it is not to be expected that the views of different authors will ever completely agree.

ALBERT GÜNTHER,

*Keeper of the Department of Zoology.*

British Museum (N. H.),  
March 4th, 1893.

## INTRODUCTION.

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THIS volume contains descriptions of 523 species of Snakes, 414 of which are represented in the National Collection by 3324 specimens.

The general classification is the same as that followed in 1890, when dealing with the herpetological fauna of India \*; but I have been able to introduce some improvements in the arrangement of the genera.

In order to render this Catalogue more useful to workers who have not access to the Collection, the lists of specimens have frequently been made to a certain extent descriptive of individual variations of scaling or coloration. For every specimen the numbers of ventral (V.) and caudal shields (C.) are given, and when necessary also the number of longitudinal rows of scales (Sc.). This will enable those who differ from the author in their estimation of specific characters to form a more correct idea of the material on which his views are based, and thus to judge better of the correctness or fallacy of his conclusions.

For Snakes with paired subcaudals it is to be understood that the figures given refer to the number of pairs, not to the total number of shields. In describing the temporal scutellation I have, unless the contrary be stated, only given the numbers in the first two rows; for instance, temporals 1+2 signifies that there is a single temporal in front, immediately followed by a pair of superposed shields, 2+3 meaning two superposed shields followed by three disposed in the same manner. In counting the number of longitudinal series of scales I have not, unless specially stated, chosen

\* 'The Fauna of British India. Reptilia and Batrachia.' Lond., 1890. Svo.

any particular region, but give the highest number to be found at any point between the anterior and the posterior fourth of the body. The indication of the number of teeth refers to the full set in each maxillary; few specimens show the complete dentition, gaps occurring here and there, but shallow sockets in the bone indicate the bases of the missing teeth. The figures intercalated in the text will help to make clear the dental characters employed in diagnosing the genera. A figure of the skull, with all the bones lettered, accompanies the definition of every family.

The dimensions are taken from the largest specimens in the Collection.

As in the preceding Catalogues of Reptiles and Batrachians, the letters in square brackets in the third column of the list of specimens signify:—" [P.] " = " Presented by " ; " [C.] " = " Collected by " ; " [E.] " = " Obtained by exchange. "

G. A. BOULENGER.

Zoological Department,  
January 23rd, 1893.

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# CATALOGUE

OF

# SNAKES.

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## Order OPHIDIA.\*

“Quadrate bone articulated to the skull; brain-capsule entirely osseous; rami of the mandible united by ligament. Anal cleft transverse. Copulatory organs present, paired.”—*Günther, Phil. Trans.* clvii. 1867, p. 625.

### *Synopsis of the Families.*

I. No ectopterygoid (transpalatine); pterygoid not extending to quadrate or mandible; no supratemporal; præfrontal forming a suture with nasal; coronoid present; vestiges of pelvis.

Maxillary vertical, loosely attached, toothed; mandible edentulous; a single pelvic bone. 1. *Typhlopidae*, Vol. I. p. 3.

Maxillary bordering mouth, forming a suture with præmaxillary, præfrontal, and frontal, toothless; lower jaw toothed; pubis and ischium present, latter forming a symphysis.

2. *Glaucóniidae*, Vol. I. p. 57.

II. Ectopterygoid present; both jaws toothed.

A. Coronoid present; præfrontal in contact with nasal.

1. Vestiges of hind limbs; supratemporal present.

Supratemporal large, suspending quadrate.

3. *Boidae*, Vol. I. p. 71.

Supratemporal small, intercalated in the cranial wall.

4. *Ilysiidae*, Vol. I. p. 131.

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\* The author now regards the Snakes as forming only a Suborder (*Ophidia*) of the Order *Squamata*, Oppel, equivalent to the Suborders *Lacertilia* and *Rhoptoglossa*, which have been dealt with in the 'Catalogue of Lizards.' Cf. Boulenger, Faun. Ind., Rept. p. 52 (1890), and Proc. Zool. Soc. 1891, p. 117.

2. No vestiges of limbs ; supratemporal absent.

5. *Uropeltidæ*, Vol. I. p. 137.

B. Coronoid absent ; supratemporal present.

1. Maxillary horizontal ; pterygoid reaching quadrate or mandible.

Præfrontal bone in contact with nasal.

6. *Xenopeltidæ*, Vol. I. p. 167.

Præfrontal not in contact with nasal.

7. *Colubridæ*, Vol. I. p. 169.

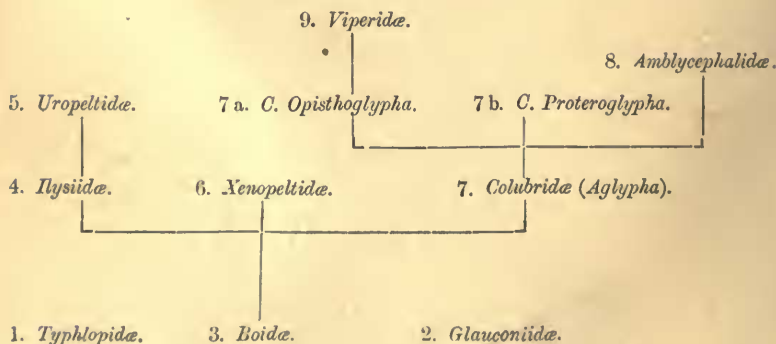
2. Maxillary horizontal, converging posteriorly towards palatine ; pterygoid not reaching quadrate or mandible.

8. *Amblycephalidæ*.

3. Maxillary vertically erectile perpendicularly to ectopterygoid ; pterygoid reaching quadrate or mandible.

9. *Viperidæ*.

No serial arrangement can convey a correct idea of the affinities of the various groups as conceived by the classifier. A diagram is therefore appended illustrating the author's views on the classification of the Ophidia, and, to a certain extent, their phylogeny. Leaving aside the *Typhlopes* and *Glauconia*, which should be regarded as degraded burrowing types independently derived from some Ophidian form less specialized than any with which we are at present acquainted, the family *Boidæ*, and more specially the Pythons, claim the position of ancestral group from which all other Ophidia may have been derived, in the manner illustrated by the diagram. This, if rightly conceived, shows how unnatural a classification into poisonous and harmless Snakes is. The Elapoids, for instance, long regarded as forming the passage from the Colubroids to the Vipers, stand apart, the author considering the Viperine maxillary as derived from the Opisthoglyphous type.



The lettering of the bones is the same in all the figures of skulls in this work, and reads as follows:—

<i>an.</i> Angular.	<i>pl.</i> Palatine.
<i>ar.</i> Articular.	<i>pm.</i> Præmaxillary.
<i>bo.</i> Basioccipital.	<i>prf.</i> Præfrontal.
<i>bs.</i> Basisphenoid.	<i>pro.</i> Proötic.
<i>cor.</i> Coronoid.	<i>py.</i> Pterygoid.
<i>c.a.</i> Columella auris:	<i>ptf.</i> Postfrontal.
<i>d.</i> Dentary.	<i>q.</i> Quadrate.
<i>eo.</i> Exoccipital.	<i>so.</i> Supraoccipital.
<i>epy.</i> Ectopterygoid.	<i>sor.</i> Supraorbital.
<i>f.</i> Frontal.	<i>sp.</i> Splenial.
<i>m.</i> Maxillary.	<i>ste.</i> Supratemporal.
<i>n.</i> Nasal.	<i>tu.</i> Turbinal.
<i>p.</i> Parietal.	<i>v.</i> Vomer.

### Fam. 1. TYPHLOPIDÆ.

- Anguiformes, part., *Oppel, Ordn. Rept.* p. 49, 1811.  
 Imbricatæ, part., *Boie, Isis*, 1827, p. 510.  
 Angiostomata Typhlopina, *J. Müller, Zeitschr. f. Physiol.* iv. p. 269, 1831.  
 Scolécophides Typhlopiens, *Duméril & Bibron, Erp. Gén.* vi. p. 256, 1844.  
 Typhlopsidæ, part., *Gray, Cat. Liz.* p. 130, 1845.  
 Opotérodontes Epanodontiens, *Duméril, Mém. Ac. Sc.* xxiii. p. 422, 1853.  
 Typhlopidae, part., *Jan, Elenco sist. Ofid.* p. 9, 1863.  
 Scolécophidia, *Cope, Proc. Ac. Philad.* 1864, p. 230.  
 Typhlopidae, *Günther, Rept. Brit. Ind.* p. 170, 1864.  
 Typhlopes, *Peters, Sitz. Ges. naturf. Fr.* 1881, p. 68, and *Reise n. Mossamb.* iii. p. 90, 1886.  
 Typhlopidae, *Cope, Proc. Amer. Philos. Soc.* xxiii. p. 481, 1886.  
 Typhlopidae, *Boulenger, Faun. Ind., Rept.* p. 231, 1890.

Cranial bones solidly united; no ectopterygoid; pterygoid not extending to quadrate or mandible; no supratemporal; præfrontal forming a suture with nasal; maxillary loosely attached, with a few teeth disposed transversely to the axis of the skull; no teeth on palate. Mandible edentulous; coronoid bone present. Vestiges of pelvis, reduced to a single bone on each side. Body covered with uniform cycloid scales; eyes under the shields.

South Europe; South Asia; Africa; Australia; Tropical America.

#### *Synopsis of the Genera.*

##### I. Head with large shields.

A pair of large præfrontals and a frontal; nostril between two small nasals. . . . . 1. *Helminthophis*, p. 4.



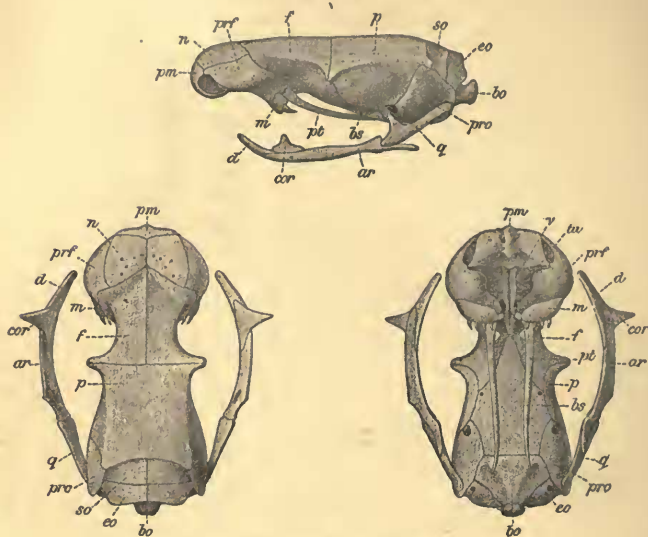
Nasal shield very large, divided or semidivided, extending on each side of the rostral to the upper surface of the head.

2. *Typhlops*, p. 7.

II. Head covered with small uniform scales.

3. *Typhlophis*, p. 57.

Fig. 1.



Skull of *Typhlops lumbricalis*.

### 1. HELMINTHOPHIS.

Rhinotyphlops (*non Fitz.*), *Peters, Mon. Berl. Ac.* 1857, p. 40.

Helminthophis, *Peters, Mon. Berl. Ac.* 1860, p. 517, and *Sitz. Ges. naturf. Fr.* 1881, p. 69; *Bocourt, Miss. Sc. Mex., Rept.* p. 502 (1882).

Idiotyphlops, *Jan, Arch. f. Nat.* 1861, p. 6, and *Arch. Zool. Anat. Phys.* i. 1862, p. 186, and *Icon. Gén. Ophid.* p. 32 (1864).

Liotyphlops, *Peters, Sitzb. Ges. naturf. Fr.* 1881, p. 69; *Bocourt, op. cit.* p. 501.

A pair of large præfrontals and a frontal; nostril between two nasals.

Tropical America.

#### *Synopsis of the Species.*

I. Præfrontals in contact behind the rostral.

Ocular shield in contact with the third

upper labial . . . . . 1. *flavoterminalis*, p. 5.

Ocular separated from the labials by a sub-

ocular . . . . . 2. *frontalis*, p. 5.

II. Præfrontals separated, the rostral forming a suture with the frontal.

- Eye under the ocular, which is separated from the labials by a subocular; two superposed præoculars . . . . . 3. *petersii*, p. 6.  
 Eye under the ocular, which is in contact with the third upper labial; a single præocular . . . . . 4. *guentheri*, p. 6.  
 Eye under the suture between the præfrontal and the ocular, which is separated from the labials by a subocular. . 5. *albirostris*, p. 6.

1. *Helminthophis flavotermiatus*.

*Typhlops flavotermiatus*, *Peters, Mon. Berl. Ac.* 1857, p. 402, and *Arch. f. Nat.* 1862, p. 43; *Günth. Tr. R. Soc. Mauritius*, iv. 1870, pp. 63, 139.  
*Idiptyphlops flavotermiatus*, *Jan, ll. cc. Icon.* 1. 1, pls. v. & vi. fig. 10 (1860).  
*Helminthophis flavotermiatus*, *Peters, Sitzb. Ges. naturf. Fr.* 1881, p. 69.

Rostral not half the width of the head, not extending to the level of the eyes, separated from the frontal by the præfrontals, which form a suture with each other; frontal broad; two superposed præoculars and a subocular; eye distinguishable under the ocular; four upper labials, first largest, third in contact with the ocular. Diameter of body 50 to 60 times in the total length; tail as long as broad or a little longer than broad, rounded. 24 scales round the body. Brown, each scale darker in the centre; head and tail yellow.

Total length 300 millim.

Venezuela.

<i>a-c.</i> Ad. & hgr.	Venezuela.	Dr. Seeman [P.].
<i>d-e.</i> Ad.	Caracas.	Dr. Ernst [P.].
<i>f, g.</i> Ad. & hgr.	Caracas.	
<i>h.</i> Ad.	Rio Juan.	
<i>i.</i> Ad.	Mauritius (imported).	L. Bouton, Esq. [P.].

2. *Helminthophis frontalis*.

*Typhlops (Helminthophis) frontalis*, *Peters, Mon. Berl. Ac.* 1860, p. 517, pl. —. fig. 1.  
*Helminthophis frontalis*, *Bocourt, Miss. Sc. Mex., Rept.* p. 502, pl. xxx. fig. 2 (1882).

Rostral not half the width of the head, not extending to the level of the eyes, separated from the frontal by the præfrontals, which form a suture with each other; frontal broad; a single præocular and two suboculars; eye distinguishable under the ocular, which is very small; four upper labials, first largest. Diameter of body

58 times in the total length; tail once and a half as long as broad, rounded. 22 scales round the body. Dark brown; head and anal region whitish.

Total length 158 millim.

Costa Rica.

3. *Helminthophis petersii*. (PLATE I. fig. 1.)

*Helminthophis petersii*, *Bouleng. Ann. & Mag. N. H.* (6) iv. 1889, p. 360.

Rostral half the width of the head, extending to between the eyes, truncate posteriorly, and forming a broad suture with the frontal; two superposed præoculars and a subocular; eye distinguishable under the ocular; four upper labials, first largest, third in contact with the subocular. Diameter of body 55 times in the total length; tail a little longer than broad, ending in a spine. 20 scales round the body. Brown, each scale darker in the centre; snout and anal region yellowish.

Total length 110 millim.

Ecuador.

a. Guayaquil. Mr. Fraser [C.]. (Type.)

4. *Helminthophis guentheri*. (PLATE I. fig. 2.)

*Helminthophis guentheri*, *Bouleng. Ann. & Mag. N. H.* (6) iv. 1889, p. 361.

Rostral one third the width of the head, extending to the level of the eyes, rounded posteriorly and forming a suture with the frontal, which is very broad; a single præocular; no subocular; eye distinguishable under the ocular; four upper labials, first largest, third in contact with the ocular. Diameter of body 50 times in the total length; tail twice as long as broad, ending in a spine. 20 scales round the body. Olive-brown above, head white; yellowish inferiorly, with small scattered olive spots.

Total length 170 millim.

Brazil.

a. Ad. Porto Real, Prov. Rio Janeiro. M. Hardy du Dréneuf [C.]. (Type.)

b-c. Ad. Porto Real. M. Hardy du Dréneuf [C.].

5. *Helminthophis albirostris*.

*Rhinotyphlops albirostris*, *Peters, Mon. Berl. Ac.* 1857, p. 402.

*Liotyphlops albirostris*, *Peters, Sitz. Ges. naturf. Fr.* 1881, p. 69;

*Bocourt, Miss. Sc. Mex., Rept.* p. 501, pl. xxx, fig. 1 (1882).

*Typhlops* (*Idiotyphlops*) *emunctus*, *Garman, N. Am. Rept.* i. p. 3 (1883).

*Helminthophis emunctus*, Cope, *Bull. U.S. Nat. Mus.* no. 32, 1887, p. 91.

Rostral very large, half the width of the head, extending beyond the level of the eyes, in contact with the frontal, which is broad; no præocular; two suboculars; eye distinguishable, under the suture between the præfrontal and the ocular: four upper labials, first largest, second in contact with the præfrontal. 22 scales round the body. Black, each scale with a reddish-brown border; head whitish.

Total length 158 millim.

Isthmus of Panama.

## 2. TYPHLOPS\*.

Typhlops, part., *Schneid. Hist. Amph.* ii. p. 339 (1801); *Merr. Tent.* p. 158 (1820); *Fitzing. N. Class. Rept.* p. 25 (1826); *Wagl. Syst. Amph.* p. 195 (1830).

Typhlops, *Dum. & Bibr. Erp. Gén.* vi. p. 279 (1844); *Gray, Cat. Liz.* p. 132 (1845); *Jan, Icon. Gén.* p. 7 (1864); *Günth. Rept. Brit. Ind.* p. 172 (1864); *Peters, Sitz. Ges. naturf. Fr.* 1881, p. 70; *Bocourt, Miss. Sc. Mex., Rept.* p. 499 (1882); *Bouleng. Faun. Ind., Rept.* p. 235 (1890).

Typhlina, *Wagl. l. c.* p. 196; *Günth. l. c.* p. 171; *Peters, l. c.* p. 70.

Pilidion, *Dum. & Bibr.* vi. p. 257 (1844).

Ophthalmidion, *Dum. & Bibr. l. c.* p. 262.

Cathetorhinus, *Dum. & Bibr. l. c.* p. 268; *Peters, l. c.* p. 70.

Onychocephalus, *Dum. & Bibr. l. c.* p. 272; *Günth. l. c.* p. 177; *Peters, l. c.* p. 70.

Onychophis, *Gray, l. c.* p. 132.

Typhlinalis, *Gray, l. c.* p. 134.

Ánilios (*non Oken*), *Gray, l. c.* p. 135.

Argyrophis, *Gray, l. c.* p. 136.

Meditoria, *Gray, l. c.* p. 139.

Diaphorotyphlops, *Jan, Elenco*, p. 10 (1863); *Peters, l. c.* p. 70.

Letheobia, *Cope, Proc. Ac. Philad.* 1868, p. 322; *Peters, l. c.* p. 70.

Gerrhopilus, *Peters, l. c.* p. 69.

Gryptotyphlops, *Peters, l. c.* p. 70.

Aspidorhynchus, *Peters, l. c.* p. 70.

Præfrontal single and small; frontal small; nasal large, single or divided into two.

South Europe; South Asia; Africa; Tropical America; Australia.

### *Synopsis of the Species.*

I. No præocular; no subocular; ocular in contact with the second and third labials.

Snout rounded; nostrils inferior; 22 scales

round the body . . . . . 1. *lineatus*, p. 15.

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\* *T. wilderi*, Garin. *Science Observer*, iv. 1883, p. 48, from Brazil, is insufficiently characterized.

- Snout with angular edge ; nostrils inferior ;  
 26 or 28 scales round the body . . . . . 2. *unilineatus*, p. 15.  
 Snout with angular edge ; nostrils lateral ; [p. 15.  
 18 scales round the body . . . . . 3. *melanocephalus*,

II. A præocular, in contact with the second, third, or second and third labials ; no subocular ; ocular in contact with labials.

A. Snout rounded ; nostrils lateral <sup>1</sup>.

1. Præocular in contact with the second and third labials.

a. Nasal cleft, or suture dividing the nasal, proceeding from the præocular.

- 20 scales round the body . . . . . 4. *braminus*, p. 16.  
 22 scales round the body . . . . . 5. *accedens*, p. 17.

b. Nasal cleft proceeding from the second labial.

α. Nasals in contact behind the rostral.

- 18 scales round the body . . . . . 6. *beddomii*, p. 18.  
 28 scales round the body . . . . . 7. *jagori*, p. 18.

β. Nasals separated by the præfrontal.

\* Nasal cleft extending to the upper surface of the snout ; 22 scales round the body.

- Rostral about one third the width of the head . . . . . 8. *leucomelas*, p. 18.  
 Rostral hardly one fourth the width of the head . . . . . 9. *jerdoni*, p. 19.

\*\* Nasal cleft not extending to the upper surface of the snout.

† Nasal not completely divided into two.

‡ 18 scales round the body ; diameter of body 60 to 90 times in the total length.

- Rostral about one third the width of the head . . . . . 10. *porrectus*, p. 19.  
 Rostral nearly half the width of the head . . 11. *guentheri*, p. 20.

‡‡ 20 scales round the body ; diameter of body 40 to 65 times in the total length.

- Rostral one third the width of the head . . 12. *leucoproctus*, p. 20.

<sup>1</sup> This arrangement into species with lateral or inferior nostrils is not perfectly satisfactory, and in some doubtful cases it will be necessary to try both divisions of this synopsis.



Rostral two fifths the width of the head . . 13. *comorensis*, p. 21.

Rostral more than half the width of the  
head . . . . . 25. *thurstonii*, p. 26.

‡‡‡ 22 or more scales round the body ; diameter of  
body 29 times or more in the total length.

§ Tail not longer than broad, ending in a  
spine.

¶ Rostral one third, or hardly one third,  
but more than one fourth, the width of  
the head.

24 scales round the body ; præocular  
broader than the ocular . . . . . 14. *socotranus*, p. 21.

22 or 24 scales round the body ; rostral  
rather more than one third the width of  
the head ; diameter of body 40 times or  
more in the total length . . . . . 15. *vermicularis*, p. 21.

24 or 26 scales round the body ; diameter  
of body not 40 times in the total length . . 16. *diardi*, p. 22.

24 scales round the body ; three concavities  
or pits under the snout . . . . . [p. 23.  
17. *bothriorhynchus*,

22 scales round the body ; rostral not  
quite one third the width of the head . . 19. *siamensis*, p. 24.

26 scales round the body ; præocular a little  
broader than the ocular . . . . . 20. *nigroalbus*, p. 24.

¶¶ Rostral hardly one fourth the width of  
the head, not extending to the level  
of the eyes ; 24 scales round the body.  
18. *oatesii*, p. 23.

¶¶¶ Rostral half the width of the head,  
not extending to the level of the eyes ;  
26 or 28 scales round the body.  
21. *muelleri*, p. 25.

§§ Tail slightly longer than broad, rounded at  
the end, without spine ; 24 scales round  
the body . . . . . 22. *madagascariensis*,  
[p. 25.

§§§ Tail longer than broad, ending in a spine ;  
22 scales round the body.

Rostral about one third the width of the  
head . . . . . 23. *flaviventer*, p. 25.

Rostral nearly half the width of the head . 24. *theobaldianus*,  
[p. 26.

†††† 26 scales round the body; diameter of body  
26 times in the total length.

28. *schneideri*, p. 27.

††††† 20 scales round the body; diameter of  
body 22 to 30 times in the total length.

29. *reticulatus*, p. 27.

†† Nasal completely divided into two.

24 scales round the body ..... 26. *acuticauda*, p. 26.

22 scales round the body ..... 27. *aluensis*, p. 27.

18 scales round the body ..... 30. *tenuis*, p. 28.

c. Nasal cleft proceeding from the first labial.

20 scales round the body ..... 31. *filiformis*, p. 29.

22 scales round the body ..... 32. *temminckii*, p. 29.

2. Præocular in contact with the third labial only.

a. Nasal incompletely divided.

30 scales round the body ..... 33. *ruficauda*, p. 29.

24 or 26 scales round the body ..... 34. *kraali*, p. 30.

b. Nasal completely divided into two.

24 scales round the body ..... 35. *platycephalus*, p. 30.

20 or 22 scales round the body ..... 36. *lumbicalis*, p. 31.

18 scales round the body; tail longer than  
broad ..... 37. *exiguus*, p. 31.

18 scales round the body; tail broader than  
long ..... 38. *cæcatus*, p. 32.

B. Snout rounded; nostrils inferior.

1. Rostral narrow, not more than one third the width of the  
head.

a. Nasal cleft not extending to the upper surface of the  
snout, which is much depressed; 22 scales round the  
body.

Diameter of body 30 times in the total  
length; tail broader than long ..... 39. *cuneirostris*, p. 32.

Diameter of body 58 times in the total  
length; tail longer than broad ..... 41. *depressus*, p. 33.

b. Nasal cleft extending to the upper surface of the snout.

24 scales round the body; nasal cleft pro-  
ceeding from the first labial ..... 44. *ligatus*, p. 34.

22 scales round the body; nasal cleft pro-  
ceeding from the second labial ..... 45. *torresianus*, p. 34.

## 2. Rostral more than one third the width of the head.

## a. Nasal cleft proceeding from the second labial.

## a. Rostral not half the width of the head.

\* Præocular narrower than the ocular; 22 scales round the body . . . . . 40. *verticalis*, p. 32.

\*\* Præocular larger than the ocular.

22 scales round the body . . . . . 42. *longissimus*, p. 33.

18 scales round the body . . . . . 43. *conradi*, p. 33.

## β. Rostral at least half the width of the head.

\* Præocular narrower than the ocular.

22 scales round the body . . . . . 48. *australis*, p. 35.

20 scales round the body . . . . . 49. *wiedii*, p. 36.

24 scales round the body . . . . . 53. *mucronatus*, p. 37.

\*\* Præocular as broad as the ocular.

20 scales round the body; tail longer than broad . . . . . 50. *exocæti*, p. 36.

22 scales round the body; tail longer than broad . . . . . 51. *bipartitus*<sup>1</sup>, p. 37.

22 scales round the body; tail as long as broad . . . . . 52. *tenuicollis*, p. 37.

## b. Nasal cleft extending from the first labial to the upper surface of the snout; 22 scales round the body.

Rostral extending to the level of the eyes. 46. *polygrammicus*,

Rostral not extending to the level of the eyes . . . . . [p. 34.]  
47. *reginæ*, p. 35.

## c. Nasal cleft proceeding from the first labial, not extending to the upper surface of the snout; tail broader than long.

a. 18 or 20 scales round the body. 54. *elegans*, p. 37.

β. 22 or 24 scales round the body.

Diameter of body 66 times in the total length . . . . . 55. *decorosus*, p. 38.

Diameter of body 43 to 50 times in the total length . . . . . 56. *obtusus*, p. 38.

Diameter of body 23 to 30 times in the total length . . . . . 57. *fornasini*, p. 38.

γ. 30 scales round the body . . . . 58. *blanfordii*, p. 39.

<sup>1</sup> The place assigned to this species in the present synopsis may prove incorrect on examination of the type specimens, the original description being insufficient.



C. Snout not hooked, with obtusely angular horizontal edge; nostrils inferior.

1. Eye not distinguishable.

a. 26 to 32 scales round the middle of the body; diameter of body 19 to 28 times in the total length.

Nasal cleft proceeding from the first labial; middle dorsal scales larger than the others..... 60. *congicus*, p. 40.

Nasal cleft proceeding from the first labial; three upper labials..... 61. *hallowellii*, p. 40.

Nasal cleft proceeding from the lower lateral border of the rostral..... 62. *anchietæ*, p. 40.

b. 24 scales round the middle of the body; diameter of body 53 times in the total length.. 65. *buchholzi*, p. 41.

2. Eye distinguishable.

a. Diameter of body 44 to 50 times in the total length; 20 or 22 scales round the middle of the body.  
59. *boettgeri*, p. 39.

b. Diameter of body 21 to 36 times in the total length.

Nasal completely divided into two; 24 scales round the middle of the body... 63. *mossambicus*, p. 41.

Nasal incompletely divided; 22 or 24 scales round the middle of the body; ocular in contact with the second, third, and fourth labials..... 64. *tettensis*, p. 41.

Nasal semidivided; 24 to 30 scales round the middle of the body; præocular not more than half as broad as the ocular.. 66. *punctatus*, p. 42.

Nasal semidivided; 30 to 32 scales round the middle of the body; præocular a little narrower than the ocular..... 67. *bibronii*, p. 44.

D. Snout more or less distinctly hooked in profile, or with sharp cutting horizontal edge; nostrils inferior.

1. 28 to 42 scales round the body; snout not hooked.

a. Nasal cleft extending from the first labial to the nostril.

a. The portion of the rostral visible from below broader than long.

- 40 to 42 scales round the middle of the body, the diameter of which is 25 to 30 times in the total ..... 68. *schlegelii*, p. 44.
- 28 to 30 scales round the middle of the body, the diameter of which is 35 to 50 times in the total ..... 69. *delalandii*, p. 45.
- 34 to 40 scales round the middle of the body, the diameter of which is 42 to 46 times in the total ..... 70. *dinga*, p. 45.
- β. The portion of the rostral visible from below as long as broad; 30 to 38 scales round the body.
- Præocular two thirds the width of the ocular, partly covering the eye..... 71. *humbo*, p. 46.
- Præocular not two thirds the width of the ocular ..... 72. *mucruso*, p. 46.
- b. Nasal cleft extending from the lower lateral border of the rostral to the nasal; 28 to 30 scales round the body.  
73. *anomalus*, p. 47.
2. 26 scales round the middle of the body; snout strongly hooked ..... 74. *schinzi*, p. 47.
3. 18 to 24 scales round the body.
- a. Eye distinguishable.
- a. Diameter of body less than 50 times in the total length.
- 24 scales round the body; rostral with obtusely angular edge ..... 75. *curvirostris*, p. 48.
- 22 scales round the body; rostral with sharp edge ..... 76. *bicolor*, p. 48.
- 20 scales round the body; snout trilobate.. 77. *bituberculatus*,  
[p. 48.
- β. Diameter of body 50 times or more in the total length.
- \* Tail not twice as long as broad.
- 22 or 24 scales round the body; tail not longer than broad ..... 78. *unguirostris*, p. 49.
- 18 scales round the body; tail about once and a half as long as broad ..... 79. *affinis*, p. 49.
- 20 scales round the body; tail not much longer than broad ..... 80. *arenarius*, p. 49.
- \*\* Tail twice to twice and a half as long as broad; 20 or 22 scales round the body.
- Rostral extending to between the eyes.... 81. *multilineatus*, p. 50.
- Rostral not extending to between the eyes ..... 82. *olivaceus*, p. 50.

\*\*\* Tail 4 or 5 times as long as broad; 24 scales round the body . . . . . 83. *cumingii*, p. 51.

b. Eye not distinguishable; 20 or 22 scales round the body.

Nasal cleft extending from the nostril to the first labial . . . . . 84. *simoni*, p. 51.

Nasal cleft extending from the nostril to the second labial . . . . . 85. *crossii*, p. 52.

### III. A præocular and one or two suboculars.

#### A. Snout rounded.

1. Præocular not in contact with the labials; 18 scales round the body.

##### a. Two suboculars.

Ocular in contact with the fourth labial .. 86. *mirus*, p. 52.

Ocular separated from the labials . . . . . 87. *andamanensis*, [p. 52

b. A single subocular . . . . . 88. *ater*, p. 53.

2. Præocular in contact with one or more labials; a single subocular.

##### a. Rostral narrow; 18 scales round the body.

Præocular in contact with the second and third labials . . . . . 89. *disparilis*, p. 53.

Præocular in contact with the second labial . . . . . 90. *microstomus*, p. 53.

##### b. Rostral nearly half the width of the head.

20 scales round the body; præocular in contact with the second, third, and fourth labials . . . . . 91. *inornatus*, p. 54.

22 scales round the body; præocular in contact with the second and third labials. 92. *pallidus*, p. 54.

#### B. Snout with sharp horizontal edge.

1. Eye not distinguishable.

[p. 54.

18 scales round the body . . . . . 93. *lumbriciformis*,

22 scales round the body . . . . . 94. *cæcus*, p. 55.

28 scales round the body . . . . . 95. *newtonii*, p. 55.

2. Eye distinguishable under the nasal shield.

25 to 27 scales round the body . . . . . 96. *unitoniatus*, p. 55.

28 to 36 scales round the body . . . . . 97. *acutus*, p. 56.

1. *Typhlops lineatus*.

*Typhlops lineatus*, *Boie, Isis*, 1827, p. 563; *Schleg. Abbild.* p. 39, pl. xxxii. figs. 32-34 (1844); *Jan, Icon. Gén.* p. 7, l. 1, pls. v. & vi. fig. 9 (1860).

*Pilidion lineatum*, *Dum. & Bibr.* vi. p. 259 (1844); *Cantor, Cat. Mal. Rept.* p. 50 (1847).

*Typhlinalis lineatum*, *Gray, Cat. Liz.* p. 134 (1845).

*Typhlina lineata*, *Günth. Rept. Brit. Ind.* p. 171, pl. xvi. fig. B (1864).

Snout rounded, strongly projecting, flat inferiorly; nostrils inferior. Rostral very large; nasal semidivided, the cleft proceeding from the first labial; a single large shield (the ocular) on each side behind the nasal; eyes hidden; præfrontal, supraoculars, and parietals large, transverse; four upper labials. Diameter of body 40 to 60 times in the total length; tail about as long as broad, ending in a spine. 22 scales round the body. Blackish above, each scale with a yellowish spot, or yellowish or pale brownish with dark brown longitudinal lines running between the series of scales; head and lower parts yellowish white.

Total length 480 millim.

Malay Peninsula and Archipelago.

<i>a.</i> Ad.	Singapore.	General Hardwicke [P.].
<i>b.</i> Ad.	Pinang.	Dr. Cantor.
<i>c-d.</i> Ad.	Malacca.	D. F. A. Hervey, Esq. [P.].
<i>e-h.</i> Ad. & hgr.	Salak, Java.	R. Kirkpatrick, Esq. [P.].
<i>i, k, l.</i> Ad. & hgr.	Java.	
<i>m-n.</i> Ad.	E. Indies.	
<i>o.</i> Hgr.	Hong Kong (?).	C. Bowring, Esq. [P.].

2. *Typhlops unilineatus*.

*Onychocephalus unilineatus*, *Dum. & Bibr.* vi. p. 278 (1844).

*Typhlops unilineatus*, *Jan, Icon. Gén.* p. 29, l. 4, pls. iv. & v. fig. 2 (1864).

Snout strongly projecting, with angular horizontal edge; nostrils inferior. Rostral about half the width of the head; nasal semidivided; a single large shield (the ocular) on each side behind the nasal; eyes distinguishable; upper head-scales scarcely enlarged. Diameter of body about 50 times in the total length. 26 or 28 scales round the body. Olive-brown above, with a black vertebral streak.

Total length 310 millim.

Cayenne.

3. *Typhlops melanocephalus*.

*Cathetorhinus melanocephalus*, *Dum. & Bibr.* vi. p. 270 (1844); *Peters, Mon. Berl. Ac.* 1865, p. 263, pl. —. fig. 6.

*Typhlops melanocephalus*, *Jan, Icon. Gén.* p. 8, l. 1, pls. v. & vi. fig. 8 (1860).

Snout strongly projecting, with angular horizontal edge; nostrils lateral. Rostral very largo, about three fifths the width of the head; nasal semidivided, the cleft proceeding from the second labial; a single large shield (the ocular) on each side behind the nasal; eyes hidden; upper head-scales scarcely enlarged; four upper labials. Diameter of body about 50 times in the total length; tail nearly twice as long as broad, ending in a spine. 18 scales round the body. Uniform dark brown; head black.

Total length 180 millim.

*Hab.* — ?

#### 4. *Typhlops braminus*.

*Russell, Ind. Serp.* i. pl. xliii. (1796).

*Eryx braminus, Daud. Rept.* vii. p. 279 (1803).

*Tortrix russellii, Merr. Tent.* p. 84 (1820).

*Typhlops braminus, Cuv. R. A.* 2nd ed. ii. p. 73 (1829); *Dum. & Bibr.* vi. p. 309 (1844); *Jan, Icon. Gén.* p. 12, l. 3, pls. iv. & v. fig. 16 (1864); *Günth. Rept. Brit. Ind.* p. 175, pl. xvi. fig. 1 (1864); *Peters, Mon. Berl. Ac.* 1865, p. 263; *Blanf. Journ. As. Soc. Beng.* xxxix. 1870, p. 370; *Stoliczka, Journ. As. Soc. Beng.* xl. 1871, p. 425; *Theob. Cat. Rept. Brit. Ind.* p. 125 (1876); *Boettg. Abh. Senck. Ges.* xi. 1879, p. 459, pl. i. fig. 1; *Peters, Reise n. Mossamb.* iii. p. 91 (1882); *Murray, Zool. Sind,* p. 374 (1884); *Bouleng. Faun. Ind., Rept.* p. 236 (1890).

— *russellii, Schleg. Abbild.* p. 39 (1844).

*Argyrophis truncatus, Gray, Cat. Liz.* p. 138 (1845).

— *bramicus, Gray, l. c.*

*Onychocephalus capensis, Smith, Ill. Zool. S. Afr., Rept.* pl. li. fig. 3, & pl. liv. figs. 9–16 (1845).

? *Ophthalmidium tenue, Hallow. Proc. Ac. Philad.* 1860, p. 497.

*Typhlops inconspicuus, Jan, Elenco,* p. 11 (1863).

— *tenuis (non Salv.), Günth. op. cit.* p. 176, pl. xvi. fig. C.

— *pammeces, Günth. op. cit.* p. 444; *Theob. op. cit.* p. 125.

— *reuteri, Boettg. Zool. Anz.* 1881, p. 650.

? *Typhlops lenzi, Boettg. Zool. Anz.* 1882, p. 478.

*Typhlops euproctus, Boettg. l. c.* p. 479.

Rostral narrow, its upper portion hardly one third the width of the head, not extending quite to the level of the eyes; nostril between two nasals, the anterior (lower) of which extends to the upper surface of the head and is in contact inferiorly with the præocular; præfrontal nearly as large as the ocular, in contact with the second and third labials; eyes distinct; upper head-scales a little larger than the scales on the body; four upper labials. Diameter of body 35 to 55 times in the total length; tail as long as or a little longer than broad, ending in a spine. 20 scales round the body. Brown or blackish above, lighter inferiorly; snout, anal region, and end of tail usually whitish.

Total length 175 millim.

South Asia; islands of the Indian Ocean; Africa south of the Equator.



a. Ad.	Muscat, Arabia.	W. T. Blanford, Esq. [P.].
b. Ad.	Kurrachee.	Kurrachee Museum [E.].
c-d. Ad. & hgr.	Nepal.	B. H. Hodgson, Esq. [P.].
e-f. Ad.	Fizabad, Oude.	Major A. E. Wilkinson [P.].
g-i. Ad.	Bengal.	General Hardwicke [P.].
k. Hgr.	Matheran, Bombay.	Dr. Leith [P.].
l. Many specs.	Dumagudem, Godavery Valley.	W. T. Blanford, Esq. [P.].
m. Hgr.	Madras.	T. C. Jerdon, Esq. [P.]. (Type of <i>T. pammeceus</i> .)
n. Yg.	Bangalore.	E. A. Minchin, Esq. [P.].
o-s. Ad. & hgr.	Salem.	Col. Beddome [C.].
t. Several specs., hgr. & yg.	Balarangams.	Col. Beddome [C.].
u. Yg.	S. Canara.	Col. Beddome [C.].
v-w. Ad.	Anamallays.	Col. Beddome [C.].
x. Many specs.	Tinnevely Hills.	Col. Beddome [C.].
y. Ad.	Ceylon.	Sir J. Banks [P.].
z-a. Ad. & hgr.	Ceylon.	G. H. K. Thwaites, Esq. [C.].
β-γ. Hgr.	Formosa.	R. Swinhoe, Esq. [C.].
δ. Ad.	Formosa.	M. Dickson, Esq. [P.].
ε-κ. Ad. & hgr.	Hong Kong.	J. J. Walker, Esq. [P.].
λ. Hgr.	Hong Kong.	C. Bowring, Esq. [P.].
μ-ν. Yg.	Yimmana, Upper Burma.	E. W. Oates, Esq. [P.].
ξ-π. Hgr. & yg.	Moulmein.	E. W. Oates, Esq. [P.].
ρ. Ad.	Bangkok.	
σ-τ. Ad. & hgr.	Pinang.	Dr. Cantor.
υ-ω. Ad. & hgr.	Java.	G. Lyon, Esq. [P.].
aa-cc. Ad. & hgr.	Philippines.	H. Cuming, Esq. [C.]. (Types of <i>A. truncatus</i> .)
dd. Hgr.	S. Negros.	A. Everett, Esq. [C.].
ee. Ad.	Manado.	Dr. A. B. Meyer [C.].
ff. Ad.	N. Celebes.	Dr. A. B. Meyer [C.].
gg. Hgr.	Mauritius.	L. Bouton, Esq. [P.].
hh. Ad.	Tamatave.	Rev. W. D. Cowan [C.].
ii-nn. Ad. & hgr.	Johanna, Comoro Ids.	C. Bewsher, Esq. [C.].
oo-rr. Ad. & hgr.	Cape of Good Hope.	Sir A. Smith [P.]. (Types of <i>O. capensis</i> .)
ss. Ad.	Cape Town.	Trustees of the S.-African Museum [P.].

5. *Typhlops accedens*.

*Typhlops accedens*, Jan, *Icon. Gén.* p. 16, l. 3, pls. iv. & v. fig. 15 (1864).

Snout round and moderately projecting; nostrils lateral. Rostral about one third the width of the head, not extending quite to the level of the eyes; nostril between two nasals, the lower of which is in contact with the præocular; latter shield nearly as large as the ocular, in contact with the second and third labials; eye distinct; supraocular and parietal strongly enlarged; four upper labials. Diameter of body 60 times in the total length; tail once and a

half as long as broad, ending in a spine. 22 scales round the body. Pinkish white, each scale roddish brown at the base; end of snout yellowish.

Total length 150 millim.

East Indies.

### 6. *Typhlops beddomii*. (PLATE I. fig. 3.)

*Typhlops beddomii*, *Bouleng. Faun. Ind., Rept.* p. 237 (1890).

Snout round and moderately projecting; nostrils lateral. Rostral narrow, its upper portion hardly one third the width of the head, not extending to the level of the eyes; nostril between two nasals, the anterior or lower of which is in contact with the first and second labials, the upper forming a suture with its fellow behind the rostral; a præocular, nearly as large as the ocular; eyes distinct; upper head-shields a little larger than the scales on the body; four upper labials. Diameter of body 20 to 40 times in the total length; tail a little longer than broad, not ending in a spine, the terminal scale obtusely conical. 18 scales round the body. Brown above, lighter inferiorly; usually a more or less distinct darker vertebral line; end of snout and chin and anal region whitish.

Total length 125 millim.

Hills of Southern India.

<i>a-d.</i> Ad. & hgr.	Kimedy Hills, Vizagapatam district.	Col. Beddome [C.]	} (Types.)
<i>e-i.</i> Ad. & hgr.	Anamallays, 2000-5000 ft.	Col. Beddome [C.]	
<i>k-l, m-n.</i> Ad. & hgr.	Travancore Hills, 2500- 3000 ft.	Col. Beddome [C.]	

### 7. *Typhlops jagori*.

*Typhlops jagorii*, *Peters, Mon. Berl. Ac.* 1861, p. 684.

Snout depressed, rounded; nostrils lateral. Upper portion of rostral elliptic, about half as broad as the head; nasals in contact behind the rostral; præocular present, in contact with the third labial only; præfrontal larger than the frontal; supraoculars smaller than the parietals; four upper labials, second twice as large as first. 28 scales round the body. Deep black above, yellowish inferiorly.

Total length 220 millim.

Luzon, Philippines.

### 8. *Typhlops leucomelas*. (PLATE I. fig. 4.)

*Typhlops leucomelas*, *Bouleng. Faun. Ind., Rept.* p. 237 (1890).

Snout rounded and moderately projecting; nostrils lateral. Rostral narrow, its upper portion about one third the width of the

head, extending to between the eyes; nostril between two nasals, the anterior of which is in contact with the first and second labials and extends to the upper surface of the head; a præocular, nearly as large as the ocular, in contact with the second and third labials; eyes distinct; upper head-scales a little larger than the scales on the body; four upper labials. Diameter of body 32 times in the total length; tail slightly longer than broad, ending in a point. 22 scales round the body. Blackish brown above, pure white inferiorly.

Total length 130 millim.

Ceylon.

- a. Haycock Mountain, 2000 ft., 40 miles from Col. Beddome [C.]  
Point de Galle. (Type.)

### 9. *Typhlops jerdoni*. (PLATE I. fig. 5.)

*Typhlops jerdoni*, *Bouleng. Faun. Ind., Rept.* p. 238 (1890).

Snout rounded and moderately projecting; nostrils lateral. Rostral very narrow, its upper portion hardly one fourth the width of the head, extending to the level of the eyes; nostril between two nasals, the anterior of which is in contact with the first and second labials and extends to the upper surface of the head; a præocular, nearly as large as the ocular, in contact with the second and third labials; eyes distinct; supraoculars and parietals much larger than the scales on the body; four upper labials. Diameter of body 37 to 46 times in the total length; tail a little longer than broad, ending in a spine. 22 scales round the body. Brown above, lighter inferiorly; end of snout, anal region, and lower surface of tail whitish.

Total length 230 millim.

Khasi Hills.

- a-c. Ad. & yg. Khasi Hills. T. C. Jerdon, Esq. [P.]. (Types.)

### 10. *Typhlops porrectus*.

*Typhlops tenuis* (*non Salv.*), *Jan, Icon. Gén.* p. 10, l. 3, pls. iv. & v. fig. 13 (1864).

— *porrectus*, *Stoliczka, Journ. As. Soc. Beng.* xl. 1871, p. 426, pl. xxv. figs. 1-4; *Theob. Cat. Rept. Brit. Ind.* p. 124 (1876); *Blanf. 2nd Yark. Miss., Rept.* p. 21 (1878); *Murray, Zool. Sind.* p. 374 (1884); *Bouleng. Faun. Ind., Rept.* p. 240 (1890).

Snout round and moderately projecting; nostrils lateral. Rostral narrow, its upper portion about one third the width of the head, not extending quite to the level of the eyes, which are very indistinct; nasal semidivided, the cleft extending from the second labial to the nostril; præocular present, nearly as large as the ocular; upper head-scales a little larger than the scales on the body; four upper labials. Diameter of body 70 to 90 times in the



total length; tail a little longer than broad, terminating in a spine. 18 scales round the body. Brown above, paler inferiorly; snout, chin, and lower surface of tail white.

Total length 220 millim.

Himalayas; India.

<i>a-b.</i> Hgr.	Bengal.	
<i>c.</i> Ad.	Bombay.	Dr. Leith [P.].
<i>d.</i> Ad.	Belgaum.	Dr. Leith [P.].
<i>e.</i> Hgr.	Trevandrum, Travancore.	H. S. Ferguson, Esq. [P.].
<i>f-g.</i> Ad. & hgr.	India.	

### 11. *Typhlops guentheri*.

*Typhlops* (*Onychocephalus*) *guentheri*, *Peters, Mon. Berl. Ac.* 1865, p. 259, pl. —. fig. 1.

Snout rounded, moderately projecting; nostrils lateral. Rostral nearly half the width of the head, broadly truncate posteriorly, extending to the level of the eyes; nasal incompletely divided, the cleft proceeding from the second labial; præocular present, narrower than the nasal or the ocular, in contact with the second and third labials; eyes distinct; præfrontal much enlarged; four upper labials. Diameter of body 60 times in the total length; tail slightly longer than broad, ending in an obtuse point. 18 scales round the body. Pale reddish brown above, whitish inferiorly; tail blackish.

Total length 142 millim.

North Australia.

<i>a.</i>	N. Australia.	Dr. J. R. Elsey [C.]. (Type.)
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### 12. *Typhlops leucoproctus*. (PLATE I. fig. 6.)

*Typhlops leucoproctus*, *Bouleng. Ann. & Mag. N. H.* (6) iv. 1889, p. 361.

Snout rounded, moderately projecting; nostrils lateral. Rostral about one third the width of the head, extending to the level of the eyes; nasal nearly completely divided, the cleft proceeding from the second labial; præocular present, a little narrower than the nasal or the ocular, in contact with the second and third labials; eyes distinguishable; upper head-scales moderately enlarged; four upper labials. Diameter of body 40 to 65 times in the total length; tail once and a half to twice as long as broad, ending in a spine. 20 scales round the body. Dark brown, somewhat lighter inferiorly; labial and anal regions yellowish.

Total length 220 millim.

New Guinea and Queensland.

<i>a.</i> Ad.	Fly River, New Guinea.	Rev. S. Macfarlane [C.].	} (Types.)
<i>b-d.</i> Ad.	Murray Id., Torres Straits.	Rev. S. Macfarlane [C.].	
<i>e.</i> Ad.	Queensland.		

13. *Typhlops comorensis*. (PLATE II. fig. 1.)

*Typhlops comorensis*, *Bouleng. Ann. & Mag. N. H.* (G) iv. 1889, p. 361.

Snout depressed, rounded, strongly projecting; nostrils lateral. Rostral two fifths the width of the head, extending to the level of the eyes; nasal semidivided, the cleft proceeding from the second labial; præocular present, as broad as the ocular, in contact with the second and third labials; eyes distinct; upper head-scales feebly enlarged; four upper labials. Diameter of body 5.4 times in the total length; tail once and a half as long as broad. 20 scales round the body. Dark brown; labial and anal regions yellowish.

Total length 245 millim.

Comoro Islands.

a. Comoro Islands. Sir J. Kirk [C.]. (Type.)

14. *Typhlops socotranus*. (PLATE II. fig. 2.)

*Typhlops socotranus*, *Bouleng. Ann. & Mag. N. H.* (G) iv. 1889, p. 362.

Snout rounded, very prominent; nostrils lateral. Rostral about one third the width of the head, not extending to the level of the eyes; nasal incompletely divided, the cleft proceeding from the second labial; præocular present, broader than the nasal or the ocular, in contact with the second and third labials; eyes distinct; upper head-scales slightly enlarged; four upper labials. Diameter of body 37 to 50 times in the total length; tail as long as broad, ending in a spine. 24 scales round the body. Whitish, with pale brown lines running between the dorsal series of scales.

Total length 200 millim.

Socotra.

a-b. Ad. Socotra. Prof. I. B. Balfour [C.]. (Types.)

15. *Typhlops vermicularis*.

*Anguis lumbricalis* (*non Linn.*), *Daud. Rept.* vii. p. 308 (1803).

*Typhlops vermicularis*, *Merr. Tent.* p. 158 (1820); *Berth. Abh. Ges. Wiss. Götting.* i. 1843, p. 52, pl. i. figs. 1-3; *Dum. & Bibr.* vi. p. 303 (1844); *Jan, Icon. Gén.* p. 18, l. 3, pls. iv. & v. fig. 3 (1864); *Strauch, Schl. Russ. R.* p. 25 (1873); *Boettg. Zool. Jahrb.* iii. 1888, p. 920.

— *flavescens*, *Bibr. & Bory, Expéd. Morée, Zool.* p. 72, pl. xiii. fig. 3 (1833); *Schleg. Abbild.* p. 37 (1844).

*Argyrophis vermicularis*, *Gray, Cat. Liz.* p. 137 (1845).

*Typhlops syriacus*, *Jan, op. cit.* p. 15, l. 3, pls. iv. & v. fig. 5; *Lortet, Arch. Mus. Lyon*, iii. 1883, p. 183, pl. xix. fig. 1.

— *persicus*, *Blanf. Ann. & Mag. N. H.* (4) xiv. 1874, p. 34, and *Zool. E. Pers.* p. 399, pl. xxvii. fig. 5 (1876).

— *lumbricalis*, *Schreib. Herp. Eur.* p. 315 (1875).

Snout depressed, rounded, strongly projecting; nostrils lateral. Rostral about one third the width of the head, extending nearly to the level of the eyes; nasal incompletely divided, the cleft proceeding from the second labial; præocular present, about as broad as the ocular, in contact with the second and third labials; eyes distinguishable; upper head-scales moderately enlarged; four upper labials. Diameter of body 40 to 52 times in the total length: tail about as long as broad, ending in a spine. 22 or 24 scales round the body. Brown or brownish above, yellowish inferiorly.

Total length 260 millim.

From the Ionian Islands, Greece, Asia Minor, and Syria, to Turkestan, Afghanistan, and Persia.

a. Hgr.	Morea.	
b. Ad.	Bay of Salamis.	— Ince, Esq. [P.].
c. Ad.	Constantinople.	
d-f, g. Ad.	Xanthus.	Sir C. Fellows [P.].
h, i. Ad.	Cyprus.	Lord Lilford [P.].
k. Hgr.	Cyprus.	Dr. C. E. Cullen [P.].
l. Ad.	Mt. Hermon.	Canon Tristram [C.].
m. Ad.	Caucasus.	St. Petersburg Mus. [E.].
n. Ad.	Ai Dara, W. slope of Copet Dagh, Transcaspia.	M. C. Eylandt [C.].
o-p. Ad.	Ashkabad, Transcaspia.	M. P. A. Warentzow [C.].
q-t. Ad.	Puli Hatun, Transcaspia.	M. C. Eylandt [C.].
u. Ad.	S.W. of Karman, 6000 ft.	W. T. Blandford, Esq. [E.].
		(One of the types of <i>T. persicus</i> .)
v. Ad.	N. of Herat.	Dr. Aitchison [C.].
		Afghan Boundary Commission.

### 16. *Typhlops diardi*.

*Typhlops diardii*, Schleg. *Abbild.* p. 39 (1844); *Dum. & Bibr.* vi. p. 300 (1844); *Jan, Icon. Gén.* p. 19, l. 3, pls. iv. & v. fig. 10 (1864); *Peters, Mon. Berl. Ac.* 1865, p. 262; *Bouleng. Faun. Ind., Rept.* p. 238, fig. (1890).

*Argyrophis horstfieldii*, Gray, *Cat. Liz.* p. 137 (1845).

*Typhlops striolatus*, *Peters, Mon. Berl. Ac.* 1861, p. 922; *Günth. Rept. Brit. Ind.* p. 174 (1864); *Theob. Cat. Rept. Brit. Ind.* p. 122 (1876).

— *horsfieldii*, *Günth. op. cit.* p. 173, pl. xvi. fig. E; *Stoliczka, Journ. As. Soc. Beng.* xl. 1871, p. 423; *Theob. op. cit.* p. 121.

— *barmanus*, *Stoliczka, Proc. As. Soc. Beng.* 1872, p. 144.

Snout rounded and strongly projecting; nostrils lateral. Rostral narrow, its upper portion about one third the width of the head, extending to between the eyes; nasal nearly completely divided, the cleft proceeding from the second labial; a præocular, nearly as large as the ocular, in contact with the second and third labials; eyes distinct; præfrontal and frontal usually scarcely larger than the scales on the body, supraoculars and parietals broader; four upper labials. Diameter of body 29 to 34 times in the total length; tail as long as broad or broader than long, terminating in a spine.

24 to 26 scales round the body. Olive-brown above, each scale with a more or less distinct light transverse streak; lower parts pale brownish or yellowish.

Total length 430 millim.

Bengal, Khasi Hills, Assam, Burma, Cochinchina.

a. Ad.	Khasi Hills.	East India Co. [P.] (Type of <i>A. horsfieldii</i> .)
b. Ad.	Khasi Hills.	T. C. Jerdon, Esq. [P.]
c-d. Ad.	Assam.	Dr. Cantor
e. Ad., bad state.	Calcutta.	Prof. Peters [P.]
		(One of the types of <i>T. striolatus</i> .)
f, g. Ad.	Tenasserim.	Dr. Packman [P.]
h, i. Hgr.	Reef Id., Tavoy.	E. W. Oates, Esq. [P.]
k. Ad., skel.	— ?	Sir A. Smith [P.]

### 17. *Typhlops bothriorhynchus*.

*Typhlops bothriorhynchus*, Günth. Rept. Brit. Ind. p. 174, pl. xvi fig. G (1864); Anders. Proc. Zool. Soc. 1871, p. 168; Stoliczka, Journ. As. Soc. Beng. xl. 1871, p. 424; Theob. Cat. Rept. Brit. Ind. p. 122 (1876); Bouleng. Faun. Ind., Rept. p. 239 (1890); W. L. Sclater, Journ. As. Soc. Beng. lx. 1891, p. 232.

Snout round and strongly projecting; nostrils lateral; a rounded concavity on each side below the nostril, and two others, less marked, on the third labial and on each side of the rostral. Rostral narrow, its upper portion about one third the width of the head, extending to between the eyes; nasal nearly completely divided, the cleft proceeding from the second labial and passing through the subnarial pit; a præocular, nearly as large as the ocular; eyes distinct; upper head-scales a little larger than the scales on the body; four upper labials. Diameter of body 30 times in the total length; tail about as long as broad, ending in a spine. 24 scales round the body. Dark brown above, paler inferiorly.

Total length 160 millim.

Northern India (North-west Provinces and Assam) and Malay Peninsula.

a. Ad.	Pinang.	Dr. Cantor. (Type.)
b. Ad.	Salsanger, Assam.	Indian Museum [E.]

### 18. *Typhlops oatesii*. (PLATE II. fig. 3.)

*Typhlops oatesii*, Bouleng. Faun. Ind., Rept. p. 238 (1890).

Snout rounded and moderately projecting; nostrils lateral. Rostral very narrow, its upper portion hardly one fourth the width of the head, extending to the level of the eyes; nasal nearly completely divided, the cleft proceeding from the second labial; a præocular, a little smaller than the ocular; eyes distinct; upper head-scales a little larger than the scales on the body; four upper labials. Diameter of body 31 to 33 times in the total length; tail

as long as broad or broader than long, ending in a spine. 24 scales round the body. Yellowish, with confluent brown spots corresponding to the series of scales and forming longitudinal lines which are broader than the interspaces.

Total length 200 millim.

Andamans.

*a-b.* Ad. Table Id., Andamans. E. W. Oates, Esq. [P.]. (Types.)

### 19. *Typhlops siamensis*.

*Typhlops siamensis*, *Günth. Rept. Brit. Ind.* p. 175, pl. xvi. fig. D (1864).

Snout rounded and moderately projecting; nostrils lateral. Rostral narrow, its upper portion hardly one third the width of the head, extending to the level of the eyes; nasal semidivided, the cleft strongly curved and proceeding from the second labial; a præocular, nearly as large as the ocular; eyes distinct; upper head-scales a little larger than those on the body; four upper labials. Diameter of body 33 times in the total length; tail not quite as long as broad, ending in a spine. 22 scales round the body. Brownish above, yellowish inferiorly.

Total length 166 millim.

Siam.

*a.* Ad. Siam. M. Mouhot [C.]. (Type.)

### 20. *Typhlops nigroalbus*.

*Typhlops nigroalbus*, *Dum. & Bibr.* vi. p. 295 (1844); *Cantor, Cat. Mal. Rept.* p. 51 (1847); *Jan, Icon. Gén.* p. 20, l. 4, pl. vi. fig. 3 (1864); *Günth. Rept. Brit. Ind.* p. 172, pl. xvi. fig. F (1864).  
*Argyrophis bicolor*, *Gray, Cat. Liz.* p. 136 (1845).

Snout rounded and strongly projecting; nostrils lateral. Rostral narrow, its upper portion about one third the width of the eye, extending to between the eyes; nasal nearly completely divided, the cleft proceeding from the second labial; a præocular, a little broader than the ocular, in contact with the second and third labials; eyes distinct; upper head-scales considerably larger than the scales on the body; four upper labials. Diameter of body 30 to 33 times in the total length; tail broader than long, ending in a spine. 26 scales round the body. Upper half black, lower yellowish white.

Total length 360 millim.

Sumatra and Malay Peninsula.

*a.* Ad. Pinang. Dr. Cantor.  
*b.* Ad. Singapore. Gen. Hardwicke [P.].  
(Type of *A. bicolor*.)  
*c.* Ad. Singapore.  
*d-e.* Ad. Perak. G. E. Dobson, Esq. [E.].  
*f.* Ad. — ?



21. *Typhlops muelleri*.

*Typhlops muelleri*, *Schleg. Abbild.* p. 32, pl. xxxii. figs. 25-28 (1844); *Dum. & Bibr.* vi. p. 298 (1844); *Jan, Icon. Gén.* p. 20, l. 4, pl. vi. fig. 2 (1864).

Agrees in form, scaling, and coloration with *T. nigroalbus*, but the rostral is broader and shorter, viz. half the width of the head, and does not extend to the level of the eyes. Scales in 26 or 28 rows.

Total length 285 millim.

Sumatra.

a. Ad. Sumatra. Dr. Bleeker. (*Pilidion dimidiatum*, Blkr.)

22. *Typhlops madagascariensis*.

*Typhlops madagascariensis*, *Boettg. Abh. Senckenb. Ges.* xi. 1877, p. 3, pl. i. fig. 1.

Snout rounded, moderately projecting; nostrils lateral. Rostral hardly one third the width of the head; nasal incompletely divided, the cleft proceeding from the second labial; præocular present, a little narrower than the ocular, in contact with the second and third labials; eyes hidden; upper head-scales enlarged; four upper labials. Diameter of body 46 times in the total length; tail slightly longer than broad, rounded at the end, without spine. 24 scales round the body. Blackish brown above and below, each scale with a somewhat lighter longitudinal streak.

Total length 410 millim.

Nossi Bé, Madagascar.

23. *Typhlops flaviventer*.

*Typhlops flaviventer*, *Peters, Mon. Berl. Ac.* 1864, p. 271; *Peters & Doria, Ann. Mus. Genova*, xiii. 1878, p. 384.

Snout rounded and strongly projecting; nostrils lateral. Rostral narrow, its upper portion about one third the width of the head, extending nearly to the level of the eyes; nasal nearly completely divided, the cleft proceeding from the second labial; a præocular, nearly as large as the ocular; eyes distinct; upper head-scales a little larger than the scales on the body; four upper labials. Diameter of body 50 to 60 times in the total length; tail twice as long as broad, ending in a spine. 22 scales round the body. Upper half black, lower yellowish white.

Total length 300 millim.

Moluccas.

a. Ad. Ternate. Marquis G. Doria [P.]



24. *Typhlops theobaldianus*.

*Typhlops theobaldianus*, *Stoliczka, Journ. As. Soc. Beng.* xl. 1871, p. 429, pl. xxv. figs. 5-8; *Theob. Cat. Rept. Brit. Ind.* p. 123 (1876); *Bouleng. Faun. Ind., Rept.* p. 240 (1890); *W. L. Schlater, Journ. As. Soc. Beng.* lx. 1891, p. 232.

Snout round and strongly projecting; nostrils lateral. Rostral considerably more than one third (nearly half) the width of the head, reaching very far back on the top of the head; nasal semi-divided, the cleft extending from the second labial to the nostril; a præocular, nearly as large as the ocular; eyes perfectly indistinct; præfrontal very slightly longer than frontal; four upper labials. Diameter of body about 70 times in the total length; tail nearly thrice as long as broad, terminating in an obtuse point, without spine. 22 scales round the body. Greyish brown, slightly paler below.

Total length 350 millim.

Assam.

25. *Typhlops thurstonii*.

*Typhlops thurstoni*, *Boettg. Ber. Senck. Ges.* 1890, p. 297.

Snout rounded, moderately projecting; nostrils lateral. Rostral rather more than half the width of the head, reaching far back on the top of the head; nasal incompletely divided, the cleft extending from the second labial to a little beyond the nostril; eyes not distinguishable; præfrontal moderate; frontal and interparietal narrow; four upper labials, third and fourth in contact with the ocular. Diameter of body 45 to 52 times in the total length; tail once and a half to twice as long as broad, without or with a very feeble and obtuse spine. 20 scales round the body. Uniform isabelline yellow, paler inferiorly.

Total length 170 millim. (reaches a length of 240 millim.).

Nilgherry Hills, S. India.

a-b. Hgr.

Nellambur.

G. E. Mason, Esq. [P.].

26. *Typhlops acuticauda*.

*Typhlops acuticauda*, *Peters, Mon. Berl. Ac.* 1877, p. 416, pl. —, fig. 2.

Snout rounded, very prominent; nostrils lateral. Rostral about one third the width of the head, extending to the level of the eyes; nostril between two nasals, the anterior in contact with the first and second labials; præocular present, a little narrower than the ocular, in contact with the second and third labials; eyes distinct; upper head-shields, except the parietals, scarcely enlarged; four upper labials. Diameter of body 52 times in the total length; tail

once and a half as long as broad, ending in a spine. 24 scales round the body. Brown above, yellow inferiorly.

Total length 123 millim.

Pelew Islands.

### 27. *Typhlops aluensis*.

*Typhlops aluensis*, *Bouleng. Proc. Zool. Soc.* 1887, p. 336, pl. xxviii. fig. 2.

Snout depressed, rounded, strongly projecting; nostrils lateral. Nostril between two nasals, the anterior in contact with the first and second labials; rostral about two fifths the width of the head, not extending quite to the level of the eyes; præocular present, as broad as the ocular, in contact with the second and third labials; eyes distinct; upper head-scales scarcely enlarged; four upper labials. Diameter of body 60 times in the total length; tail twice and one third as long as broad, ending in a spine. 22 scales round the body. Brown above, yellowish inferiorly.

Total length 245 millim.

Solomon Islands.

*a. Ad.?* Alu, Shortland Islands. C. M. Woodford, Esq. [C.]  
(Type.)

### 28. *Typhlops schneideri*.

*Typhlops schneideri*, *Jan, Icon. Gén.* p. 20, l. 9, pl. i. fig. 3 (1864).

Snout round, moderately projecting; nostrils lateral. Rostral about one third the width of the head; nasal semidivided, the cleft proceeding from the second labial; præocular present, nearly as large as the ocular, in contact with the second and third labials; eyes hidden; upper head-scales strongly enlarged; four upper labials. Diameter of body 26 times in the total length; tail broader than long, ending in a spine. 26 scales round the body. Olive above, yellowish inferiorly.

Total length 230 millim.

Bangkok, Siam.

### 29. *Typhlops reticulatus*.

*Anguis reticulata*, *Linn. S. N.* i. p. 391 (1766); *Schneid. Hist. Amph.* ii. p. 325 (1801); *Daud. Rept.* vii. p. 324 (1802).

— *rostralis*, *Weigel, Schrift. Berl. naturf. Ges.* iii. 1782, p. 190.

*Typhlops crococatus*, *Schneid. l. c.* p. 340.

*Anguis nasutus*, *Gmel. S. N.* i. p. 1120 (1788).

— *rostratus*, *Daud. l. c.* p. 316.

*Typhlops lumbricalis*, *Schleg. Abbild.* p. 35, pl. xxxii. figs. 1-4 (1844).

— *reticulatus*, *Dum. & Bilr.* vi. p. 282, pl. lx. (1844); *Jan,*

- Icon. Gén.* p. 10, l. 4, pl. vi. fig. 1, & l. 5, pls. v. & vi. fig. 7 (1864).  
*Argyrophis reticulatus*, *Gray, Cat. Liz.* p. 137 (1845).  
*Ophthalmidion crassum*, *A. Dum. Cat. Méth. Rept.* p. 202 (1851).

Snout rounded; nostrils lateral. Rostral hardly one third the width of the head, extending to the level of the eyes; nasal incompletely divided, the cleft proceeding from the second labial; a præocular, a little narrower than the nasal or the ocular, in contact with the second and third labials; eyes distinct; upper head-scales slightly enlarged; four upper labials. Diameter of body 22 to 30 times in the total length; tail broader than long, ending in a spine. 20 scales round the body. Dark brown or black above, uniform or the scales edged with lighter; snout, tail, and lower parts yellowish.

Total length 300 millim.

Tropical South America.

a. Ad.	Demerara.	Dr. Hannah [P.].
b. Ad.	Macasseema, Brit. Guiana.	W. L. Sclater, Esq. [P.].
c. Ad.	Cayenne.	
d. Ad.	Bahia.	Dr. Wucherer [C.].
e. Ad.	Yurimaguas, Huallaga R.	Dr. Hahnel [C.].
f. Yg.	Moyobamba, E. Peru.	A. H. Roff, Esq. [C.].

### 30. *Typhlops tenuis*.

- Typhlops tenuis*, *Salvin, Proc. Zool. Soc.* 1860, p. 454.  
 — *perditus*, *Peters, Mon. Berl. Ac.* 1869, p. 435; *Bocourt, Miss. Sc. Mex., Rept.* p. 499, pls. xxix. fig. 3, & xxx. fig. 3 (1882).  
 — *basimaculatus*, *Cope, Proc. Ac. Philad.* 1866, p. 320.  
 — *prælongus*, *F. Müller, Verh. naturf. Ges. Basel*, vii. 1885, p. 674.

Snout rounded, very prominent; nostrils lateral. Rostral about one third the width of the head; nostril between two nasals, the anterior in contact with the first and second labials; a præocular, as large as the ocular, in contact with the second and third labials; eyes hidden or just distinguishable; upper head-scales scarcely enlarged; four upper labials. Diameter of body 50 to 62 times in the total length; tail as long as broad or a little broader than long, ending in a spine. 18 scales round the body. Pale brown above, yellowish inferiorly; or yellowish, each dorsal scale with a brown spot.

Total length 310 millim.

Central America.

a. Ad.	Coban, Vera Paz.	O. Salvin, Esq. [C.]. (Type.)
b. Ad.	Guatemala.	
c. Ad.	Orizaba.	
d. Ad.	Teapa, Tabasco.	O. Salvin & F. D. Godman, Esqrs. [P.].
e-f, g. Ad. & hgr.	Mexico	M. Sallé [C.].

31. *Typhlops filiformis*.

*Typhlops filiformis*, *Dum. & Bibr.* vi. p. 307 (1844); *Jan, Icon. Gén.* p. 10, l. 3, pl. iv. fig. 12, & l. 9, pl. i. fig. 7 (1864).

Snout rounded; nostrils lateral. Rostral about one third the width of the head, extending nearly to the level of the eyes; nasal semidivided, the cleft proceeding from the first labial; præocular present, in contact with the second and third labials; eyes distinguishable; supraoculars and parietals larger than the scales on the body; four upper labials. Diameter of body about 60 times in the total length; tail hardly longer than broad, ending obtusely. 20 scales round the body. Reddish brown, lighter inferiorly.

Total length 135 millim.

*Hab.* — ?

32. *Typhlops temminckii*.

*Typhlops temminckii*, *Jan, Icon. Gén.* p. 14, l. 3, pls. iv. & v. fig. 6 (1864).

Snout round, strongly projecting; nostrils lateral. Rostral about one fourth the width of the head, not extending quite to the level of the eyes; nasal incompletely divided, the cleft proceeding from the first labial; præocular present, narrower than the ocular, in contact with the second and third labials; eyes distinct; præfrontal and supraoculars much enlarged; four upper labials. Diameter of body 45 times in the total length; tail slightly longer than broad, ending in a spine. 22 scales round the body. Brown above, each scale with a lighter edge; yellowish white inferiorly.

Total length 225 millim.

*Hab.* — ?

33. *Typhlops ruficauda*.

*Anilios ruficauda*, *Gray, Cat. Liz.* p. 136 (1845).

*Typhlops ruficauda*, *Peters, Mon. Berl. Ac.* 1861, p. 684.

— *dichromatus*, *Jan, Icon. Gén.* p. 21, l. 3, pls. iv. & v. fig. 1 (1864).

? *Typhlops petersii*, *Steind. Verh. zool.-bot. Ges. Wien*, 1867, p. 515, pl. xiii. figs. 7-9.

Snout rounded, moderately projecting; nostrils lateral. Rostral about one third the width of the head, extending to the level of the eyes; nasal semidivided, the cleft proceeding from the second labial; præocular present, as broad as the ocular, in contact with the third labial only; eyes distinct; præfrontal, supraocular, and parietal considerably larger than the scales on the body; four upper labials. Diameter of body 31 to 55 times in the total length; tail as long as broad, ending in a spine. 30 scales round the body. Reddish brown above; snout, tail, and lower surfaces yellowish.

Total length 250 millim.

Philippine Islands.

a-c. Ad., hgr., & yg.

Philippines.

(Types.)





36. *Typhlops lumbricalis*.

- Brown, Jamaica*, p. 460, pl. xlv. fig. 1 (1766).  
*Anguis lumbricalis*, *Linn. S. N.* i. p. 391 (1766).  
 — *jamaicensis*, *Shaw, Zool.* iii. p. 588 (1802).  
*Typhlops lumbricalis*, *Oppel, Ordn. Rept.* p. 55 (1811); *Dum. & Bibr.* vi. p. 287 (1844); *Gosse, Nat. Soj. Jamaica*, p. 262 (1851); *Jan, Icon. Gén.* p. 12, l. 3, pls. iv. & v. fig. 4 (1864); *Peters, Mon. Berl. Ac.* 1865, p. 262.  
 — *cinereus*, *Guér. Icon. R. A., Rept.* pl. xviii. fig. 2 (1838).  
 — *cubæ*, *Bibr. in R. de la Sagra, Hist. Cuba, Erp.* p. 204, pl. xxii. (1843).  
 — *richardii*, *Dum. & Bibr. t. c.* p. 290; *Jan, l. c.* p. 16, fig. 7.  
*Anilius leachii*, *Gray, Cat. Liz.* p. 135 (1845).  
*Meditoria nasuta*, *Gray, l. c.* p. 139.  
*Typhlops sulcatus*, *Cope, Proc. Ac. Philad.* 1868, p. 128.

Snout rounded or subacuminate, rather depressed, strongly projecting; nostrils lateral. Rostral hardly one third the width of the head, extending to the level of the eyes; nostril between two nasals, the anterior of which is in contact with the first and second labials; præocular present, nearly as broad as the ocular (sometimes transversely divided into two), in contact with the third labial only; eyes distinct; upper head-scales not or scarcely enlarged. Diameter of body 34 to 40 times in the total length; tail as long as broad or a little longer than broad, ending in a spine. 20 or 22 scales round the body. Brown above, yellowish inferiorly.

Total length 320 millim.

West Indies; Guiana.

<i>a.</i> Ad.	Cuba.	
<i>b-g.</i> Ad. & yg.	Jamaica.	P. H. Gosse, Esq. [P.].
<i>h.</i> Ad.	Bluefields, Jamaica.	P. H. Gosse, Esq. [P.].
<i>i-k.</i> Ad.	Haiti.	Hr. Rolle [C.].
<i>l.</i> Several specs., ad. & hgr.	S. Thomas.	Hr. Riise [C.].
<i>m-n.</i> Ad. & hgr.	S. Thomas.	H.M.S. 'Challenger.'
<i>o.</i> Yg.	Antigua.	Sir A. Smith [P.].
<i>p.</i> Hgr.	Barbados (?).	
<i>q.</i> Ad.	Berbice.	Lady Essex [P.]. (Type of <i>M. nasuta</i> .)
<i>r-s.</i> Ad.	— ?	(Types of <i>A. leachii</i> .)

37. *Typhlops exiguus*.

*Typhlops exiguus*, *Jan, Icon. Gén.* p. 9, l. 3, pls. iv. & v. fig. 11 (1864).

Snout round, feebly projecting; nostrils lateral. Rostral about one fourth the width of the head, not extending to the level of the eyes; nostril between two nasals, the anterior in contact with the first and second labials; præocular present, narrower than the ocular, in contact with the third labial only; eyes distinguishable; upper head-scales enlarged; four upper labials. Diameter of body



about 60 times in the total length; tail once and a half as long as broad, ending in a spine. 18 scales round the body. Yellowish above, white inferiorly.

Total length 135 millim.  
East Indies.

### 38. *Typhlops cæcatus*.

*Typhlops cæcatus*, *Jan, Icon. Gén.* p. 9, l. 3, pls. iv. & v. fig. 2 (1864).

Snout round, feebly projecting; nostrils lateral. Rostral about one third the width of the head; nostril between two nasals, the anterior in contact with the first and second labials; præocular present, nearly as broad as the ocular, in contact with the third labial only; eyes hidden; upper head-scales enlarged; four upper labials. Diameter of body 40 times in the total length; tail broader than long, ending in a spine. 18 scales round the body. Brown, paler inferiorly; snout and lower surface of tail white.

Total length 147 millim.  
Gold Coast.

### 39. *Typhlops cuneirostris*.

*Typhlops cuneirostris*, *Peters, Mon. Berl. Ac.* 1879, p. 775, pl. —, fig. 4.

Snout very prominent, much depressed, cuneiform, with rounded edge and inferior nostrils. Rostral narrow, hardly one third the width of the head, not extending to the level of the eyes; nasal incompletely divided, the cleft proceeding from the second labial; præocular present, narrower than the nasal, as large as the ocular, in contact with the second and third labials; eyes distinct; supra-oculars and parietals larger than the scales on the body; four upper labials. Diameter of body about 30 times in the total length; tail broader than long, ending in a spine. 22 scales round the body. Dorsal scales edged with brown, the edges forming eight longitudinal dark lines on the body; lower parts white.

Total length 146 millim.  
Brava, Somaliland.

### 40. *Typhlops verticalis*.

*Onychocephalus verticalis*, *Smith, Ill. Zool. S. Afr., Rept.* pl. liv. (1845).

— *macrurus*, *Peters, Mon. Berl. Ac.* 1860, p. 78, pl. —, and 1865, p. 263.

Snout moderately prominent, rounded; nostrils inferior. Rostral about three fifths the width of the head, not extending to the level of the eyes; nasals nearly meeting behind the rostral, semidivided, the cleft proceeding from the second labial; præocular present,

much narrower than the nasal or the ocular, in contact with the second and third labials; eyes distinguishable; præfrontal large, supraoculars and parietals very broad; four upper labials. Diameter of body 42 to 45 times in the total length; tail nearly twice as long as broad. 22 scales round the body. Uniform brownish yellow.

Total length 170 millim.

Interior of South Africa.

a. Ad.

S. Africa.

Sir A. Smith [P.]. (Type.)

#### 41. *Typhlops depressus*.

*Typhlops depressus*, *Peters, Mon. Berl. Ac.* 1880, p. 220.

Head much depressed, broader than the neck; snout rounded; nostrils inferior. Rostral narrow; nasal incompletely divided, the cleft proceeding from the second labial; præocular narrower than the ocular, in contact with the second and third labials; eyes distinct; four upper labials. Diameter of body 58 times in the total length; tail longer than broad, pointed. 22 scales round the body. Dark brown above, yellowish inferiorly.

Total length 235 millim.

Duke of York Island.

#### 42. *Typhlops longissimus*.

*Ophthalmidion longissimum*, *Dum. & Bibr.* vi. p. 263 (1844).

*Typhlops longissimus*, *Jan, Icon. Gén.* p. 21, l. 5, pls. v. & vi. fig. 6 (1864); *Bocourt, Miss. Sc. Mex., Rept.* p. 500, pl. xxix. fig. 11 (1882).

Snout rounded; nostrils inferior. Rostral nearly half the width of the head; nasal semidivided, the cleft proceeding from the second labial; præocular present, much larger than the ocular, in contact with the second and third labials; eyes invisible; præfrontal and supraoculars much enlarged; four upper labials. Diameter of body about 50 times in the total length; tail once and a half as long as broad, ending in a spine. 22 scales round the body. Uniform grey, end of snout yellowish.

Total length 350 millim.

*Hab.* — ?

#### 43. *Typhlops conradi*.

*Typhlops conradi*, *Peters, Mon. Berl. Ac.* 1874, p. 162, pl. —. fig. 1.

Snout rounded; nostrils inferior. Rostral two fifths the width of the head, extending nearly to the level of the eyes; nasal semidivided, the cleft proceeding from the second labial; præocular present, much larger than the ocular, in contact with the second and third labials; eyes distinguishable; upper head-scales enlarged; four upper labials. Diameter of body 58 times in the total length;

tail a little broader than long. 18 scales round the body. Brown, somewhat lighter inferiorly; head and end of tail white.

Total length 175 millim.

North Celebes.

#### 44. *Typhlops ligatus*.

*Typhlops ligatus*, *Peters, Mon. Berl. Ac.* 1879, p. 775, pl. — fig. 3.  
— *curtus*, *Douglas Ogilby, Rec. Austral. Mus.* ii. 1892, p. 23.

Snout moderately prominent, rounded; nostrils inferior. Rostral narrow, band-like, not one third the width of the head, extending to the level of the eyes; nasal completely (or nearly completely) divided, the cleft extending from the first labial to the upper surface of the head; præocular present, slightly narrower than the nasal or the ocular, in contact with the second and third labials; eyes distinguishable; præfrontal, supraoculars, and parietals considerably enlarged; four upper labials. Diameter of body 25 (to 32) times in the total length; tail once and a half as long as broad, ending in a spine. 24 scales round the body. Brown above, yellowish inferiorly.

Total length 250 millim.

Queensland.

a. Ad.

Rockhampton.

#### 45. *Typhlops torresianus*. (PLATE II. fig. 4.)

*Typhlops torresianus*, *Bouleng Ann. & Mag. N. H.* (6) iv. 1889, p. 302.

Snout prominent, rounded; nostrils inferior. Rostral about one third the width of the head, not extending quite to the level of the eyes; the portion visible from below half as broad as long; nasal incompletely divided, the cleft extending from the second labial to the upper surface of the snout; præocular present, narrower than the nasal or the ocular, in contact with the second and third labials; eyes distinguishable; præfrontal, supraoculars, and parietals enlarged; four upper labials. Diameter of body 40 to 43 times in the total length; tail a little longer than broad, ending in a spine. 22 scales round the body. Dark olive or brown above, the scales edged with lighter; whitish inferiorly.

Total length 400 millim.

Murray Island, Torres Straits.

a-b. Ad. & hgr. Murray Island. Rev. S. Macfarlane [C.]. (Types.)

#### 46. *Typhlops polygrammicus*.

*Typhlops polygrammicus*, *Schleg. Abbild.* p. 40, pl. xxxii. figs. 35-38 (1844); *Dun. & Bibr.* vi. p. 302 (1844); *Jan, Icon. Gén.* p. 13, l. 3, pls. iv. & v. fig. 9 (1864); *Peters, Mon. Berl. Ac.* 1865, p. 262. *Anilius nigrescens*, *Gray, Cat. Liz.* p. 135 (1845). *Argyrophis polygrammicus*, *Gray, l. c.* p. 138.

*Typhlops nigrescens*, *Jan, op. cit.* p. 13, l. 9, pl. i. fig. 1; *McCoy, Prodr. Zool. Viet.* pl. ciii. (1885).

— *rüppelli*, *Jan, op. cit.* p. 14, l. 9, pl. i. fig. 2.

Snout prominent, rounded; nostrils inferior. Rostral about half the width of the head, extending to the level of the eyes; the portion visible from below longer than broad; nasal incompletely divided, the cleft extending from the first labial to the upper surface of the snout; præocular present, narrower than the nasal or the ocular, in contact with the second and third labials; eyes distinguishable; præfrontal, supraoculars, and parietals considerably enlarged; four upper labials. Diameter of body 31 to 50 times in the total length; tail once and one fourth to twice as long as broad, ending in a spine. 22 scales round the body. Brown or dark olive above, the scales edged with lighter; white inferiorly.

Total length 435 millim.

Timor; North and East Australia.

a. Ad.	Queensland.	H.M.S. 'Challenger.'	
b. Hgr.	Queensland.	Col. Beddome [C.].	
c-e. Ad.	N. S. Wales.	G. Krefft, Esq. [C.].	
f. Hgr.	Sydney.		
g. Hgr.	Paramatta, N. S. Wales.	A. G. Butler, Esq. [P.].	Types of <i>A. nigrescens</i> .
h. Hgr.	Paramatta, N. S. Wales.	G. Newport, Esq. [P.].	
i. Hgr.	Australia.	Lord Derby [P.].	

#### 47. *Typhlops reginæ*. (PLATE III. fig. 1.)

*Typhlops reginæ*, *Bouleng. Ann. & Mag. N. H.* (6) iv. 1889, p. 362.

Snout prominent, rounded; nostrils inferior. Rostral nearly half the width of the head, not extending to the level of the eyes; the portion visible from below longer than broad; nasal incompletely divided, the cleft extending from the first labial to the upper surface of the snout; præocular present, nearly as broad as the nasal or the ocular, in contact with the second and third labials; eyes distinguishable; præfrontal, supraoculars, and parietals much enlarged; four upper labials. Diameter of body 37 to 50 times in the total length; tail a little longer than broad, ending in a spine. 22 scales round the body. Greyish olive above, whitish inferiorly.

Total length 410 millim.

Queensland.

a-c. Ad. & hgr. Queensland. Col. Beddome [C.]. (Types.)

#### 48. *Typhlops australis*.

*Anilius australis*, *Gray, Cat. Iiz.* p. 135 (1845).

*Typhlops preissi*, *Jan, Icon. Gén.* p. 15, l. 1, pl. v. fig. 2 (1860).

— *australis*, *Peters, Mon. Berl. Ac.* 1865, p. 263, pl. —. fig. 3.

Snout very prominent, rounded; nostrils inferior. Rostra large, about three fifths the width of the head, the upper part as long as broad, not extending to the level of the eyes; nasal semidivided,



the cleft proceeding from the second labial; præocular present, a little narrower than the nasal or the ocular, in contact with the second and third labials; eyes distinguishable; præfrontal, supra-oculars, and parietals considerably enlarged; four upper labials. Diameter of body 33 to 37 times in the total length; tail as long as broad, ending in a spine. 22 scales round the body. Pale olive-brown above, yellowish inferiorly.

Total length 265 millim.

West Australia.

<i>a-b.</i> Ad. & hgr.	W. Australia.	(Types.)
<i>c.</i> Ad.	Swan River.	

#### 49. *Typhlops wiedii*.

*Typhlops wiedii*, *Peters, Mon. Berl. Ac.* 1867, p. 24.

Snout very prominent, rounded; nostrils inferior. Rostral large, three fifths the width of the head, extending nearly to the level of the eyes, the portion visible from below longer than broad; nostril nearly completely divided, the cleft extending from the second labial to the upper surface of the snout; præocular present, narrower than the nasal or the ocular, in contact with the second and third labials; eyes distinct; upper head-scales a little enlarged; four upper labials. Diameter of body 42 to 67 times in the total length; tail as long as broad, or a little longer than broad, ending in a spine. 20 scales round the body. Buff above, yellowish inferiorly.

Total length 290 millim.

Queensland and New South Wales.

<i>a-f.</i> Ad. & hgr.	Queensland.	
<i>g-m.</i> Ad.	New South Wales.	Imperial Institute.

#### 50. *Typhlops exocæti*. (PLATE III. fig. 2.)

*Typhlops exocæti*, *Bouleng. Proc. Zool. Soc.* 1887, p. 517.

Snout depressed, rounded, strongly projecting; nostrils inferior. Rostral broad, upper portion broadest anteriorly, about half the width of the head, extending to the level of the eyes; nasal incompletely divided, the cleft proceeding from the second labial; a præocular, of about the same size as the ocular, in contact with the second and third labials; eyes distinguishable; upper head-scales a little larger than the scales on the body; four upper labials. Diameter of body 58 to 66 times in the total length; tail twice as long as broad, ending in a spine. 20 scales round the body. Pale brownish, each scale with a brown spot; these spots largest and darkest on the dorsal surface, where they form longitudinal lines.

Total length 350 millim.

Christmas Island, Indian Ocean.

<i>a-b.</i> Ad. & hgr.	Christmas Island.	Capt. Maclear [P.], H.M.S. 'Flying Fish.' (Types.)
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51. *Typhlops bipartitus*.

*Typhlops bipartitus*, *Sauvage, Bull. Soc. Philom.* (7) iii. 1879, p. 59.

Snout rounded; nostrils inferior. Rostral large; nasal semi-divided; præocular as broad as the ocular; four upper labials. 22 scales round the body. Tail longer than broad. Yellowish green above, light brown inferiorly.

Total length 250 millim.

Tidore (?) Island, Northern New Guinea.

52. *Typhlops tenuicollis*.

*Onychocephalus* (*Ophthalmidion*) *tenuicollis*, *Peters, Mon. Berl. Ac.* 1864, p. 272, pl. —. fig. 2.

*Typhlops tenuicollis*, *Theob. Cat. Rept. Brit. Ind.* p. 123 (1876); *Bouleng. Faun. Ind., Rept.* p. 241 (1890).

Snout round and moderately projecting; nostrils inferior. Rostral broad, its upper portion more than half as broad as the head; nasal semidivided, the cleft proceeding from the second labial; a præocular, about as large as the ocular; eyes not distinguishable; præfrontal and frontal very broad, broader than the ocular and parietal; four upper labials. Diameter of body 65 times in the total length; tail as long as broad, terminal scute obtusely conical. 22 scales round the body. Olive-brown above, yellowish inferiorly.

Total length 365 millim.

Himalaya.

53. *Typhlops mucronatus*.

*Typhlops* (*Ophthalmidion*) *mucronatus*, *Boettg. Zool. Anz.* 1880, p. 279, and *Abh. Senckenb. Ges.* xii. 1881, p. 438, pl. i. fig. 1.

Snout very prominent, depressed, rounded, with inferior nostrils. Rostral half the width of the head; nasal nearly completely divided, the cleft proceeding from the second labial; præocular present, a little narrower than the nasal or the ocular, in contact with the second and third labials; eyes distinct; upper head-scales enlarged; four upper labials. Diameter of body 42 to 55 times in the total length; tail as long as broad or a little longer, ending in a spine. 24 scales round the body. Grey-brown or olive, lighter inferiorly.

Total length 330 millim.

Nossi Bé, Madagascar.

*a-b.* Ad. & hgr.

Nossi Bé.

Senckenberg Museum [E.].

54. *Typhlops elegans*.

*Typhlops* (*Ophthalmidion*) *elegans*, *Peters, Mon. Berl. Ac.* 1868, p. 450, pl. ii. fig. 1; *Bocage, Journ. Sc. Lisb.* x. 1887, p. 199.

Snout very prominent, rounded, with inferior nostrils. Rostral large, about half as broad as the head, extending to the level of the



eyes, the portion visible from below a little broader than long; nasal completely divided into two, the cleft proceeding from the first labial; præocular present, much narrower than the ocular, in contact with the second and third labials; eyes distinguishable; præfrontal and supraoculars larger than the scales on the body; four upper labials. Diameter of body 36 to 49 times in the total length; tail broader than long. 18 or 20 scales round the body. Orange, with black longitudinal lines running between the series of scales and becoming indistinct on the belly.

Total length 390 millim.

Ilha do Principe, West Africa.

### 55. *Typhlops decorosus*.

*Typhlops* (Ophthalmidion) *decorosus*, *Buchh. & Peters, Mon. Berl. Ac.* 1875, p. 197.

Closely allied to *T. elegans*, but body more elongate, its diameter 66 times in the total length, and 24 scales round the body.

Total length 330 millim.

Cameroons.

### 56. *Typhlops obtusus*.

*Typhlops* (Onychocephalus) *obtusus*, *Peters, Mon. Berl. Ac.* 1865, p. 260, pl. —. fig. 2, and *Reise n. Mossamb.* iii. p. 95 (1882).

Snout very prominent, rounded, with inferior nostrils. Rostral large, more than half as broad as the head, the portion visible from below as long as broad; nasal semi-divided, the cleft proceeding from the first labial; præocular present, much narrower than the nasal or the ocular, in contact with the second and third labials; eyes not distinguishable; præfrontal and supraoculars broad; four upper labials. Diameter of body 43 to 50 times in the total length; tail broader than long, ending in a spine. 22 or 24 scales round the middle of the body. Dorsal scales brown or blackish, whitish at the base, darker on the sides; lower parts whitish.

Total length 300 millim.

South-east Africa.

a-b. Ad.

Shiré Valley.

(Types.)

c. Ad.

Nyassaland.

H. H. Johnston, Esq. [P.].

### 57. *Typhlops fornasinii*.

*Typhlops fornasinii*, *Bianconi, Spec. Zool. Mosamb.* p. 13, pl. iii. fig. 1 (1847); *Jan, Icon. Gén.* p. 17, l. 5, pls. v. & vi. fig. 5 (1864); *Peters, Reise n. Mossamb.* iii. p. 94, pl. xv. fig. 3 (1882).

*Onychocephalus trilobus*, *Peters, Mon. Berl. Ac.* 1854, p. 621, and 1860, p. 80.

Snout very prominent, depressed, rounded, with more or less distinctly trilobate horizontal outline; nostrils inferior. Rostral

large, about half the width of the head, the portion visible from below nearly as long as broad; nasal incompletely divided, the cleft proceeding from the first labial; præocular present, a little narrower than the nasal or the ocular, in contact with the second labial only; eyes just distinguishable; upper head-scales enlarged; four upper labials. Diameter of body 23 to 30 times in the total length; tail a little broader than long, ending in a spine. 24 scales round the body. Bluish or greyish, anal region yellowish.

Total length 160 millim.

Mozambique.

58. *Typhlops blanfordii*. (PLATE II. fig. 5.)

*Typhlops eschrichtii* (*non Schleg.*), *Blanf. Geol. & Zool. Abyss.* p. 457 (1870).

— *blanfordii*, *Bouleng. Ann. & Mag. N. H.* (6) iv. 1889, p. 363.

Snout very prominent, depressed, rounded, with inferior nostrils. Rostral large, more than half the width of the head, extending to between the eyes, the portion visible from below nearly as long as broad; nasal semidivided, the cleft proceeding from the first labial; præocular present, much narrower than the nasal or the ocular, in contact with the second and third labials; eyes distinct, below the præocular and the ocular; præfrontal much enlarged, supraoculars and parietals feebly enlarged; four upper labials. Diameter of body 40 times in the total length; tail broader than long, ending in a spine. 30 scales round the body. Olive-grey, basal half of each dorsal scale blackish; a narrow whitish strip along the middle of the lower surface.

Total length 320 millim.

Abyssinia.

a. Ad. Senafé. W. T. Blandford, Esq. [P.]. (Type.)

59. *Typhlops boettgeri*. (PLATE II. fig. 6.)

Snout very prominent, depressed, with obtusely angular horizontal edge and inferior nostrils. Rostral large, more than half the width of the head, not extending to between the eyes, the portion visible from above as broad as long; nasal semidivided, the cleft proceeding from the second labial; præocular present, much narrower than the nasal or the ocular, in contact with the second and third labials; eyes distinct, below the ocular; præfrontal scarcely enlarged, supraoculars and parietals a little larger; four upper labials. Diameter of body 44 to 50 times in the total length; tail as long as broad, ending in a spine. 20 or 22 scales round the body. Colourless.

Total length 220 millim.

Madagascar.

a-e. Ad., hgr., & yg. S.W. Madagascar. Mr. Last [C.].

60. *Typhlops congicus*.

*Typhlops* (*Onychocephalus*) *congicus*, *Boettg. Zool. Anz.* 1887, p. 650,  
and *Ber. Senck. Ges.* 1888, p. 44, pl. i. fig. 5.

Snout very prominent, with obtusely angular horizontal edge and inferior nostrils. Rostral large, the portion visible from below as long as broad; nasal semidivided, the cleft proceeding from the first labial; præocular present, nearly as broad as the nasal or the ocular, in contact with the second and third labials; eyes not distinguishable; præfrontal, frontal, supraoculars, and parietals larger than the scales on the body; four upper labials. Diameter of body 28 times in the total length; tail broader than long. 26 scales round the middle of the body, 28 anteriorly; the scales of the middle dorsal row distinctly larger than the others. Yellowish grey, a little lighter inferiorly, above with indistinct darker lines.

Total length 450 millim.

Near Banana, Congo.

61. *Typhlops hallowellii*.

*Typhlops hallowelli*, *Jan, Icon. Gén.* p. 29, l. 4, pls. iv. & v. fig. 6  
(1864).

Snout very prominent, with obtusely angular horizontal edge and inferior nostrils. Rostral large; nasal semidivided, the suture proceeding from the first labial; præocular present, narrower than the nasal or the ocular; eyes not distinguishable; præfrontal, supraoculars, and parietals larger than the scales on the body; three upper labials, the first formed by the fusion of two. Diameter of body 19 times in the total length; tail much broader than long. 28 scales round the body. Uniform yellowish olive.

Total length 152 millim.

Gold Coast.

62. *Typhlops anchietæ*.

*Typhlops* (*Onychocephalus*) *anchietæ*, *Bocage, Journ. Sc. Lisb.* xi.  
1886, p. 172.

*Onychocephalus anchietæ*, *Matschie, Zool. Jahrb.* v. 1890, p. 608.

Snout very prominent, with obtusely angular horizontal edge and inferior nostrils. Rostral large; nasal semidivided, the suture proceeding from the lower lateral border of the rostral; præocular present, narrower than the nasal or the ocular, in contact with the second labial; eyes not distinguishable; four upper labials. Diameter of body 24 times in the total length; tail much broader than long. 30 to 32 scales round the body. Pale yellow, with greyish-brown blotches.

Total length 119 millim.

Angola, Transvaal.

63. *Typhlops mossambicus*.

*Typhlops eschrichtii* (non Schl.), *Bianconi, Spec. Zool. Mosamb.* p. 10 (1850).

*Onychocephalus mossambicus*, *Peters, Mon. Berl. Ac.* 1854, p. 621, and 1860, p. 82.

*Typhlops bianconii*, *Jan, Icon. Gén.* p. 23, l. 1, pls. v. & vi. fig. 3 (1860).

— *mossambicus*, *Jan, op. cit.* p. 22, l. 5, pls. v. & vi. fig. 3 (1864); *Peters, Reise n. Mossamb.* iii. p. 93, pl. xv. fig. 2 (1882).

Snout very prominent, rounded, with an obtuse horizontal keel and inferior nostrils. Rostral large, not extending to the level of the eyes, which are distinguishable; nasal completely divided, the cleft proceeding from the first labial; præocular present, a little narrower than the nasal or the ocular, in contact with the second and third labials; four upper labials. Diameter of body 30 times in the total length; tail broader than long, ending in a spine. 24 scales round the middle of the body, 25 or 26 anteriorly. Dark brown; lower surface of head and anal region yellowish.

Total length 150 millim.

South-east Africa, from Mozambique to Delagoa Bay.

<i>a.</i> Ad.	Mozambique.	Prof. Bianconi [P.].
<i>b.</i> Ad.	Mozambique.	

64. *Typhlops tettensis*.

*Onychocephalus tettensis*, *Peters, Mon. Berl. Ac.* 1860, p. 80.

*Typhlops tettensis*, *Peters, Reise n. Mossamb.* iii. p. 92, pl. xv. fig. 1.

Snout very prominent, rounded, with an obtuse horizontal keel and inferior nostrils. Rostral large, not extending to the level of the eyes, which are distinguishable; nasal incompletely divided, the cleft proceeding from the first labial; præocular present, a little narrower than the nasal or the ocular, in contact with the second upper labial; ocular in contact with the second, third, and fourth upper labials; four upper labials. Diameter of body  $37\frac{1}{2}$  times in the total length; tail hardly as long as broad. 24 scales round the body anteriorly, 22 posteriorly. Greenish blue.

Total length 165 millim.

Tette, Mozambique.

65. *Typhlops buchholzi*.

*Typhlops* (*Onychocephalus*) *buchholzi*, *Peters, Sitzb. Ges. naturf. Freunde*, 1881, p. 71.

Snout with an obtuse horizontal keel and inferior nostrils. Rostral large; præfrontal much larger than frontal, which, like the supraoculars and parietals, is larger than the scales on the body; eyes hidden; nasal semidivided, the cleft proceeding from the first



labial; præocular present, nearly as large as the ocular, in contact with the second and third labials; four upper labials. Diameter of body 53 times in the total length; tail broader than long. 24 scales round the body. Yellow, with indistinct darker longitudinal lines.

Total length 370 millim.

Mungo, West Africa.

### 66. *Typhlops punctatus*.

*Acontias punctatus*, *Leach, in Bowditch, Miss. Ashantee*, p. 493 (1819).

*Typhlops eschrichtii*, *Schleg. Abbild.* p. 37, pl. xxxii. figs. 13, 16 (1844); *Peters, Mon. Berl. Ac.* 1860, p. 83; *Jan, Icon. Gén.* p. 26, l. 1, pls. v. & vi. fig. 4 (1861); *Peters, Mon. Berl. Ac.* 1865, p. 262.

*Ophthalmidion eschrichtii*, *Dum. & Bibr.* vi. p. 265 (1844).

*Onychocephalus congestus*, *Dum. & Bibr. t. c.* p. 334; *Peters, l. c.*

*Onychophis barrowii*, *Gray, Cat. Liz.* p. 133 (1845).

— *punctata*, *Gray, l. c.*

*Onychocephalus liberiensis*, *Hallow. Proc. Ac. Philad.* 1848, p. 59; *A. Dum. Arch. Mus. x.* p. 186 (1860); *Peters, Mon. Berl. Ac.* 1860, p. 82.

— *nigro-lineatus*, *Hallow. l. c.* p. 60.

*Typhlops liberiensis*, *Jan, op. cit.* p. 24, l. 5, pls. v. & vi. fig. 1 (1864).

— *liberiensis*, var. *intermedia*, *Jan, op. cit.* l. 5, pls. v. & vi. fig. 2.

— *kraussii*, *Jan, op. cit.* p. 26, l. 3, pl. vi. fig. 2 (1864).

— *lineolatus*, *Jan, op. cit.* p. 24, l. 9, pl. i. fig. 4 (1864).

*Onychocephalus angolensis*, *Bocage, Journ. Sc. Lisb.* i. 1866, pp. 46 & 65.

— *kraussi*, *Reichen. Arch. f. Nat.* 1874, p. 291.

*Typhlops* (*Ophthalmidion*) *eschrichtii*, var. *intermedia et lineolata*, *Peters, Mon. Berl. Ac.* 1877, p. 614.

*Aspidorhynchus eschrichtii*, *Peters, Sitzb. Ges. naturf. Freunde*, 1881, p. 70.

*Typhlops* (*Ophthalmidion*) *kraussii*, *Bocage, Journ. Sc. Lisb.* xi. 1887, p. 180.

— (*Aspidorhynchus*) *eschrichti*, *Boettg. Ber. Senck. Ges.* 1888, p. 42.

Snout very prominent, rounded, with an obtuse horizontal keel and inferior nostrils. Rostral very large, extending to the level of the eyes, which are distinguishable; nasal semidivided, the suture extending from the first labial to the nostril; præocular present, narrower than the nasal, not more than half as broad as the ocular, in contact with the second and third labials; four upper labials. Diameter of body 21 to 32 times in the total length; tail broader than long, ending in a spine. 24 to 30 scales round the middle of the body, 26 to 32 anteriorly. Coloration very variable.

Total length 630 millim.

West and Central Africa.

- A. 30 scales round the middle of the body, 30 or 32 anteriorly.
- a. Dark brown above, each scale with a small yellowish spot; each ventral scale yellowish in the centre and brown on the borders. (*T. punctatus*, *eschrichtii*.)
- a. Hgr. Fantee. T. E. Bowditch, Esq. [P.]  
(Type of *T. punctatus*.)
- b. Hgr. Gambia. Sir A. Smith [P.]
- c, d-e. Ad. & yg. Monbuttu. Dr. Emin Pasha [P.]
- f. Hgr. Lado. Dr. Emin Pasha [C.]
- b. Like the preceding but with scattered irregular yellow blotches above and below.
- g. Yg. Monbuttu. Dr. Emin Pasha [P.]
- c. Like a, but ventral scales uniform yellowish.
- h, i. Ad. W. Africa.
- B. 24 to 28 scales round the middle of the body, 26 to 30 anteriorly.
- a. Dark brown above, each scale with a small yellowish spot; each ventral scale yellowish in the centre and brown on the borders. (*T. lineolatus*.)
- k. Ad. Angola.
- l. Hgr. Monbuttu. Dr. Emin Pasha [P.]
- b. Like a, but ventral scales uniform yellowish. (*T. intermedius*, *angolensis*.)
- m. Yg. Gambia. Sir A. Moloney [P.]
- n. Ad. Cameroons.
- o. Hgr. Oil River. H. H. Johnston, Esq. [P.]
- c. The yellow spots on the upper surfaces confluent into longitudinal lines separated by black streaks; lower parts uniform yellowish. (*T. nigrolineatus*, *kraussi*.)
- p. Ad. Old Calabar.
- q. Hgr. Accra, Gold Coast. F. Tyrrell, Esq. [P.]
- r. Yg. — ?
- d. Black above, each scale paler, brownish, in the middle; lower parts uniform yellowish.
- s. Ad. Old Calabar.
- t. Ad. — ?
- e. Like d, with irregular yellow spots or large blotches above, or yellow with irregular black blotches above. (*T. congestus*, *barrowii*, *liberiensis*.)
- u. Ad. Fernando Po. H. Veitch, Esq. [P.]
- v. Hgr. Ashantee.
- w. Hgr. Sierra Leone. H. O. Hart, Esq. [P.]
- x, y. Ad. & hgr. W. Africa.
- z. Hgr. — ? Sir J. Barrow [P.]  
(Type of *O. barrowii*.)



67. *Typhlops bibronii*.

*Onychocephalus bibronii*, *Smith, Ill. Zool. S. Afr., Rept.* pl. li. fig. 2 & pl. liv. figs. 5-8 (1845).

Snout very prominent, with angular but not trenchant edge and inferior nostrils. Rostral very large, extending to the level of the eyes, the portion visible from below broader than long; nasal semi-divided, the suture proceeding from the first labial; præocular present, narrower than the nasal or the ocular, in contact with the second labial; eyes distinct, below the suture between the ocular and the præocular; præfrontal usually much larger than the supraoculars and parietals, which are larger than the scales of the body; four upper labials. Diameter of body 28 to 36 times in the total length; tail as long as broad, or broader than long, ending in a spine. 30 to 32 scales round the middle of the body, 32 to 34 anteriorly. Brown above, yellowish inferiorly.

Total length 480 millim.

South Africa.

a. Hgr.	North of Latakoo.	Sir A. Smith [P.]. (One of the types.)
b. Ad.	Lessooto.	M. F. Lataste [P.].
c. Ad.	Caffraria.	
d. Ad.	King Williamstown.	J. P. M. Weale, Esq. [P.].
e. Ad.	King Williamstown.	H. Trevelyan, Esq. [P.].
f. Ad.	Port Elizabeth.	
g. Hgr.	Port Natal.	Rev. H. Calloway [P.].
h. Ad.	S. Africa.	Dr. Quain [P.].
i. Ad.	S. Africa.	Chatham Museum.

68. *Typhlops schlegelii*.

*Typhlops schlegelii*, *Bianconi, Spec. Zool. Mosamb.* p. 13, pl. iii. fig. 2 (1850); *Jan, Icon. Gén.* p. 27, l. 3, pl. vi. fig. 1 (1864); *Peters, Reise n. Mossamb.* iii. p. 99 (1882); *Bouleng. Ann. & Mag. N. H.* (6) ii. 1888, p. 139.

*Onychocephalus schlegelii*, part., *Peters, Mon. Berl. Ac.* 1860, p. 82.

Snout very prominent, with sharp cutting edge and inferior nostrils. Rostral very large, extending to the level of the eyes, the portion visible from below broader than long; nasal semidivided, the suture proceeding from the first labial; præocular present, narrower than the nasal or the ocular, in contact with the second and third labials; eyes distinct, below the suture between the præocular and the ocular; supraoculars and parietals larger than the scales on the body; four upper labials. Diameter of body 25 to 30 times in the total length; tail broader than long, ending in a spine. 40 (or 42) scales round the middle of the body, 38 anteriorly. Uniform olive-brown above, or parti-coloured yellow and olive-brown, the latter colour forming irregular blotches; lower parts uniform yellow.

Total length 380 millim.; reaches a length of 690 millim.

South-east and Central Africa.

a. Ad.	Delagoa Bay.	S. African Museum.
b-c. Ad. & hgr.	Lado.	Dr. Emin Pasha [C.].

69. *Typhlops delalandii*.

- Typhlops lalandii*, *Schleg. Abbild.* p. 38, pl. xxxii. figs. 17-20 (1844);  
*Jan, Icon. Gén.* p. 28, l. 4, pl. iv. fig. 1 (1864).  
*Onychocephalus delalandii*, *Dum. & Bibr.* vi. p. 273 (1844); *Smith,*  
*Ill. Zool. S. Afr., Rept.* pl. li. fig. 1 & pl. liv. figs. 1-4 (1845);  
*Peters, Mon. Berl. Ac.* 1865, p. 262.  
*Onychophis franklinii*, *Gray, Cat. Liz.* p. 132 (1845).  
 — *lalandii*, *Gray, l. c.*  
 ? *Onychophis fordii*, *Gray, l. c.* p. 134.  
*Typhlops smithii*, *Jan, op. cit.* p. 27, l. 1, pls. v. & vi. fig. 5 (1860).

Snout very prominent, with sharp cutting edge and inferior nostrils. Rostral very large, extending to the level of the eyes, the portion visible from below broader than long; nasal semidivided, the suture proceeding from the first labial; præocular present, narrower than the nasal, about half as broad as the ocular, in contact with the second, or second and third labials; eyes distinct; præfrontal, supraoculars, and parietals usually subequal in size and larger than the scales of the body; four upper labials. Diameter of body 35 to 50 times in the total length; tail as long as broad, or broader than long, ending in a spine. 28 to 30 scales round the middle of the body, 30 anteriorly. Pale brown above, each scale with a darker central spot, yellowish inferiorly.

Total length 320 millim.

South Africa.

a-c. Ad.	Cape of Good Hope.	Sir A. Smith [P.].
d. Ad.	Cape of Good Hope.	
e-g. Hgr. & yg.	Port Elizabeth.	H. A. Spencer, Esq. [P.].
h. Ad.	Karoo.	Trustees of the S. African Museum [P.].
i-k. Ad.	Orange River.	Dr. Kannemeyer [P.].
l. Ad.	—?	Lord Derby [P.]. (Type of <i>O. franklinii</i> .)

70. *Typhlops dinga*.

*Onychocephalus dinga*, *Peters, Mon. Berl. Ac.* 1854, p. 620.

— *schlegelii*, part., *Peters, Mon. Berl. Ac.* 1860, p. 82.

*Typhlops dinga*, *Peters, Reise n. Mossamb.* iii. p. 98, pl. xiv. fig. 1  
& pl. xiv. a. fig. 3 (1882).

Snout very prominent, with sharp cutting edge and inferior nostrils. Rostral very large, extending to the level of the eyes, the portion visible from below broader than long; nasal semidivided, the suture proceeding from the first labial; præocular present, a little narrower than the nasal or the ocular, in contact with the second and third labials; eyes distinct; præfrontal and supraoculars considerably larger than the scales on the body; four upper labials. Diameter of body 42 to 46 times in the total

length; tail broader than long, ending in a spine. 34 to 40 scales round the body. Rusty red above, with confluent black spots.

Total length 685 millim.

Mozambique.

### 71. *Typhlops humbo*.

*Typhlops* (*Onychocephalus*) *humbo*, *Bocage, Journ. Sc. Lisb.* xi. 1886, p. 171.

Snout very prominent, with sharp cutting edge and inferior nostrils. Rostral very large, extending to the level of the eyes, the portion visible from below as broad as long; nasal semidivided, the suture proceeding from the first labial; præocular present, two thirds the width of the nasal or the ocular, in contact with the second, or second and third labials; eyes rather indistinct, below the suture between the præocular and the ocular; præfrontal, supraoculars, and parietals not or but slightly larger than the scales on the body; four upper labials. Diameter of body 35 or 37 (34 to 41) times in the total length; tail broader than long, ending in a spine. 38 (or 36) scales round the middle of the body, 34 anteriorly. Dark olive above, irregularly dotted with pale olive; pale olive inferiorly, mottled with darker.

Total length 450 millim.; reaches a length of 775 millim.

Benguela and interior of East Africa.

*a-b.* Ad.

Mpwapwa, 200 miles in interior of East Africa.

### 72. *Typhlops mucruso*.

*Onychocephalus mucruso*, *Peters, Mon. Berl. Ac.* 1854, p. 621, and 1860, p. 83.

— *varius*, *Peters, Mon. Berl. Ac.* 1860, p. 82.

— *petersii*, *Bocage, Journ. Sc. Lisb.* iv. 1873, p. 249.

*Typhlops* (*Onychocephalus*) *riparius*, *Peters, Sitzb. Ges. naturf. Freunde*, 1881, p. 50.

— *mucruso*, *Peters, Reise n. Mossamb.* iii. p. 95, pl. xiii. fig. 3 (1882).

— *varius*, *Peters, op. cit.* p. 97, pl. xiv. fig. 2 & pl. xiv. A. fig. 1.

— *riparius*, *Peters, op. cit.* p. 98, pl. xiv. A. fig. 2.

Snout very prominent, with sharp cutting edge and inferior nostrils. Rostral very large, extending to the level of the eyes, the portion visible from below as broad as long; nasal semidivided, the suture proceeding from the first labial; præocular present, one half to three fifths the width of the nasal or the ocular, in contact with the second, or second and third labials; eyes distinct; præfrontal and supraoculars a little larger than the scales on the body. Diameter of body 25 to 35 times in the total length; tail as long as broad or broader than long, ending in a spine. 30 to 36 (38) scales round the middle of the body, 32 to 34 anteriorly. Coloration of upper parts variable; lower parts uniform yellowish.

Total length 480 millim.

Tropical Africa south of the Equator.

A. Yellow or pale olive above, the scales with dark borders forming more or less regular longitudinal lines. (*T. mucruso*.)

a. Ad.	Mouth of the Zambesi.	Capt. Bedingfield [P.].
b-d. Hgr.	Zambesi.	Sir J. Kirk [C.].
e-f. Hgr. & yg.	Zanzibar.	Sir J. Kirk [C.].
g. Hgr. (imperfect).	E. Africa.	Capt. Speke [P.].

B. Intermediate between A and C, the dark longitudinal lines being distinct but with the addition of irregular small dark brown spots.

h. Hgr.	Angola.	Lieut. Cameron [P.].
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C. Yellowish above, with irregular blackish or dark brown blotches. (*T. varius*.)

i-l. Hgr.	Zanzibar.	Sir J. Kirk [C.].
m. Hgr.	Delagoa Bay.	S. African Museum [P.].

### 73. *Typhlops anomalus*.

*Onychocephalus anomalus*, *Bocage, Journ. Sc. Lisb.* iv. 1873, p. 248, pl. i. fig. 3.

? *Typhlops* (*Onychocephalus*) *crassatus*, *Peters, Sitzb. Ges. naturf. Freunde*, 1831, p. 50.

Snout very prominent, with sharp cutting edge and inferior nostrils. Rostral very large, extending to the level of the eyes; nasal semidivided, the suture proceeding from the lateral border of the rostral; præocular much narrower than the ocular; eyes distinct, below the suture between the præocular and the ocular; four upper labials. Diameter of body about 20 times in the total length; tail broader than long. 28 to 30 scales round the body. Uniform brown above; sides and lower parts yellow.

Total length 188 millim.

South-west Africa (Mossamedes; Loango?).

### 74. *Typhlops schinzi*.

*Typhlops* (*Onychocephalus*) *schinzi*, *Boetty. Ber. Senck. Ges.* 1887, p. 154, pl. v. fig. 1.

Snout strongly hooked, with sharp cutting edge and inferior nostrils. Rostral large, but not extending posteriorly to the level of the eyes; nasal semidivided, the cleft proceeding from the first labial; præocular present, narrower than the nasal or the ocular, in contact with the third labial; eyes distinct; upper head-scales larger than the scales on the body; four upper labials. Diameter of body 45 times in the total length; tail as long as broad, ending in a spine. 26 scales round the middle of the body, 28 behind the head. Yellowish, above with small black spots.

Total length 226 millim.

North Kalahari.



75. *Typhlops curvirostris*.

*Typhlops curvirostris*, *Peters, Mon. Berl. Ac.* 1879, p. 776, pl. —. fig. 5.

Snout very prominent, hooked, with obtusely angular horizontal edge and inferior nostrils. Rostral large, its upper part a little longer than broad and not extending back to the level of the eyes; lower portion of the rostral a little longer than broad; nasal nearly completely divided, the cleft proceeding from the first labial; præocular present, narrower than the nasal or the ocular, in contact with the second and third labials; eyes distinct; supraoculars and parietals broad; four upper labials. Diameter of body 42 or 43 times in the total length; tail nearly as long as broad, ending in a small spine. 24 scales round the body. Brown above, each scale with a light transverse streak anteriorly; snout and lower parts yellowish white.

Total length 210 millim.

Queensland.

a. Ad. Rockhampton.

76. *Typhlops bicolor*.

*Onychocephalus bicolor*, *Peters, Mon. Berl. Ac.* 1860, p. 81.

*Typhlops bicolor*, *Jan, Icon. Gén.* p. 31, l. 4, pls. iv. & v. fig. 3 (1861).

Snout very prominent, with sharp cutting edge and inferior nostrils. Rostral large, its upper part about half the width of the head, not extending to the level of the eyes, its lower part as broad as long; nasal semidivided, the cleft proceeding from the second labial; præocular present, narrower than the nasal or the ocular, in contact with the second and third labials; eyes distinct; parietals broad; four upper labials. Diameter of body 30 to 34 times in the total length; tail a little longer than broad, ending in a small spine. 22 scales round the body. Brown or dark olive above, whitish inferiorly.

Total length 330 millim.

Southern Australia (Melbourne and Adelaide) and West Australia.

a. Hgr. W. Australia. Mr. Duboulay [C.]  
b. Ad. Australia.

77. *Typhlops bituberculatus*.

*Onychocephalus bituberculatus*, *Peters, Mon. Berl. Ac.* 1863, p. 233, and 1867, p. 708, pl. —. fig. 4.

Snout very prominent, with sharp cutting edge and a knob-like prominence above the nostrils, which are inferior. Rostral large, more than half the width of the head, not extending to the level of the eyes; nasal incompletely divided, the cleft proceeding from the second labial; præocular present, much narrower than the



nasal, a little narrower than the ocular, in contact with the second and third labials; eyes distinct; parietals broad; four upper labials. Diameter of body 44 to 46 times in the total length; tail as long as broad or a little longer than broad. 20 scales round the body. Brown above, whitish inferiorly.

Total length 320 millim.

Australia\*.

a. Ad. Queensland. Indian Museum [E.].

### 78. *Typhlops unguirostris*.

*Typhlops* (*Onychocephalus*) *unguirostris*, *Peters, Mon. Berl. Ac.* 1867, p. 708, pl. —. fig. 3.

Snout very prominent and somewhat hooked, with sharp cutting edge and inferior nostrils; nasal swollen above the nostril. Rostral very large, extending nearly to the level of the eyes, the portion visible from below longer than broad; nasal nearly completely divided, the cleft proceeding from the second labial; præocular present, narrower than the nasal or the ocular, in contact with the second and third labials; eyes distinct; supraoculars and parietals much larger than the scales on the body; four upper labials. Diameter of body 62 (or 56) times in the total length; tail nearly as long as broad, with a minute terminal point. 22 (or 24) scales round the body. Pale brown above, yellowish inferiorly.

Total length 500 millim.

North Australia.

a. Ad. N.W. Australia.

### 79. *Typhlops affinis*. (PLATE III. fig. 3.)

*Typhlops affinis*, *Bouleng. Ann. & Mag. N. H.* (6) iv. 1889, p. 363.

This small *Typhlops* has been regarded by Peters (*Mon. Berl. Ac.* 1867, p. 709) as the young of *T. unguirostris*, with which it agrees in every respect except in having only 18 scales round the body and a somewhat longer tail. Diameter of body 57 times in the total length.

Total length 170 millim.

Queensland.

a. Yg.? Queensland. Col. Beddome [C.]. (Type.)

### 80. *Typhlops arenarius*.

*Onychocephalus arenarius*, *Grandid. Ann. Sc. Nat.* (5) xv. 1872, art. 20, p. 9.

Snout very prominent; nostrils inferior. Rostral large, with

\* The type specimen is stated to be from Adelaide; a half-grown specimen from the Edward River, New South Wales, is preserved in the Zoological Museum of Cambridge University.

sharp horizontal edge, its upper portion about two fifths the width of the head, longer than broad and not extending to the level of the eyes; lower portion of rostral subtriangular, gradually narrowing towards the mouth; nasal completely divided, the cleft proceeding from the second labial; præocular present, a little smaller than the ocular, in contact with the second and third labials; eyes distinct; scales on vertex scarcely enlarged; four upper labials. Diameter of body 52 to 68 times in the total length; tail slightly longer than broad, ending in a spine. 20 scales round the body. Flesh-colour.

Total length 205 millim.

Madagascar.

a. Ad.

Madagascar.

### 81. *Typhlops multilineatus*.

*Typhlops multilineatus*, *Schleg. Abbild.* p. 40, pl. xxxii. figs. 39-42 (1844); *Peters, Mon. Berl. Ac.* 1860, p. 77; *Jan, Icon. Gén.* p. 30, l. 4, pls. iv. & v. fig. 4 (1864).

*Onychocephalus multilineatus*, *Dum. & Bibr.* vi. p. 276 (1844).

Snout very prominent, with sharp cutting edge and inferior nostrils. Rostral very large, extending to between the eyes, the portion visible from below as broad as long; nasal nearly completely divided, the cleft proceeding from the first labial; præocular present, nearly as broad as the ocular, in contact with the second and third labials; eyes distinct; præfrontal, supraoculars, and parietals much broader than the scales on the body; four upper labials. Diameter of body 50 to 60 times in the total length; tail nearly twice as long as broad, ending in a spine. 20 scales round the body. Greyish, with dark brown longitudinal lines corresponding with the series of scales.

Total length 370 millim.

New Guinea and neighbouring Islands.

a. Ad.

Kei Islands.

Capt. Langen [P.].

### 82. *Typhlops olivaceus*.

*Onychophis olivaceus*, *Gray, Cat. Liz.* p. 133 (1845).

*Onychocephalus olivaceus*, *Peters, Mon. Berl. Ac.* 1861, p. 684.

*Typhlops (Onychocephalus) angusticeps*, *Peters, Mon. Berl. Ac.* 1877, p. 417, pl. —. fig. 3.

Snout very prominent, with a narrow, suberescentic sharp transverse edge and inferior nostrils. Rostral large, its upper part longer than broad and about three fifths the width of the head, not extending to the level of the eyes, its lower part as broad as long; nasal nearly completely divided, the cleft proceeding from the first labial; præocular present, nearly as broad as the nasal or the ocular, in contact with the second and third labials; eyes distinct;

præfrontal considerably enlarged; four upper labials. Diameter of body 50 to 68 times in the total length; tail twice and a half as long as broad, ending in a spine. 20 or 22 scales round the body. Pale brown, lighter inferiorly.

Total length 410 millim.

Philippines, Moluccas, North-west Australia.

a. Ad.	Philippines.	H. Cuming, Esq. [C.] (Type.)
b. Ad.	Mysol.	
c. Ad.	Malay Archipelago.	Dr. Bleeker.
d. Yg.	Champion Bay.	Mr. Duboulay [C.]

### 83. *Typhlops cumingii*. (PLATE III. fig. 4.)

*Onychophis cumingii*, Gray, *Cat. Liz.* p. 133 (1845).

*Onychocephalus cumingi*, Boettg. *Ber. Senck. Ges.* 1886, p. 104.

Snout very prominent, with a narrow, subrescentic sharp transverse edge and inferior nostrils. Rostral large, its upper part longer than broad and about half the width of the head, not extending to the level of the eyes, its lower part as broad as long; nasal completely divided, the cleft proceeding from the second labial; præocular present, narrower than the nasal or the ocular, in contact with the third labial only; præfrontal not enlarged, parietals broad; eyes distinct; four upper labials. Diameter of body 48 to 52 times in the total length; tail four or five times as long as broad, ending in a spine. 24 scales round the body. Olive-brown above, yellowish inferiorly.

Total length 365 millim.

Philippines.

a-b. Ad. & hgr.	Philippines.	H. Cuming, Esq. [C.]	} (Types.)
c. Ad.	—?	Sir E. Belcher [P.]	

### 84. *Typhlops simoni*.

*Onychocephalus simoni*, Boettg. *Ber. Senck. Ges.* 1878-79, p. 58, and 1880-81, p. 135, pl. iii, fig. 1.

Snout very prominent, pointed, with sharp cutting edge and inferior nostrils. Head-shields granulated; rostral very large, both upper and lower parts longer than broad; nasal cleft extending from the first labial to the nostril, which is close to the rostral; præocular present, as large as the ocular, but much smaller than the nasal, in contact with the second and third labials; eyes not distinguishable; præfrontal and supraoculars larger than the scales on the body; four upper labials. Diameter of body 57 to 60 times in the total length; tail slightly longer than broad, without terminal spine. 20 scales round the body. Colourless.

Total length 165 millim.

Palestine.

a. Ad.?	Haifa.	Senckenberg Museum [E.]
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85. *Typhlops crossii*. (PLATE III. fig. 5.)

Snout very prominent, obtusely pointed, with sharp cutting edge and inferior nostrils. Head-shields granulated; rostral very large, its upper portion longer than broad, its lower portion as broad as long; nasal completely divided, the cleft proceeding from the second labial; præocular present, as large as the ocular, but smaller than the nasal, in contact with the second and third labials; eyes not distinguishable; præfrontal and supraoculars larger than the scales on the body; four upper labials. Diameter of body 54 times in the total length; tail as long as broad, without terminal spine. 22 scales round the body. Colourless.

Total length 270 millim.

West Africa.

a. Ad. Asaba, 180 miles up the Niger. Dr. J. W. Crosse [P.].

86. *Typhlops mirus*.

*Typhlops mirus*, Jan, *Icon. Gén.* p. 9, l. 1, pls. v. & vi. fig. 7 (1860); *Günth. Rept. Brit. Ind.* p. 176, pl. xvi. fig. H (1864); *Theob. Cat. Rept. Brit. Ind.* p. 126 (1876); *Bouleng. Faun. Ind., Rept.* p. 240 (1890).

Snout round and moderately prominent; nostrils lateral. Rostral broad, about half the width of the head; nostril between two nasals, the anterior of which is small and in contact with the first and second labials; a præocular, nearly as large as the ocular, which is in contact with the fourth labial; a subocular separating the præocular and the ocular from the second and third labials; eyes indistinct; upper head-scales a little larger than the scales on the body; four upper labials. Diameter of body 43 to 60 times in the total length; tail a little longer than broad, ending obtusely, without spine. 18 scales round the body. Brown above, snout and lower parts yellowish.

Total length 140 millim.

Ceylon.

a-b, c, d. Ad. Ceylon. Prof. G. B. Howes [P.].  
e-f. Ceylon.

87. *Typhlops andamanensis*.

*Typhlops andamanensis*, *Stoliczka, Journ. As. Soc. Beng.* xl. 1871, p. 428, pl. xxv: figs. 9-12; *Theob. Cat. Rept. Brit. Ind.* p. 124 (1876); *Bouleng. Faun. Ind., Rept.* p. 241 (1890).

Snout round, moderately prominent; nostrils lateral. Width of rostral above about one third the width of the head; nostril between two nasals, the anterior of which is small and in contact with the first and second labials; a præocular, nearly as large as the ocular; both the latter shields separated from the labials by a pair of suboculars; eyes indistinct; upper head-scales scarcely enlarged; four upper labials. Diameter of body about 40 times in the total length;



tail twice as long as broad, very obtuse and terminating in a minute point. 18 scales round the body. General colour above shining deep brownish black, the base of the scales being somewhat dull black; sides vinaceous; paler on the lower parts, which are throughout checkered with white; mouth and the tail below, including the tip, also mostly white.

Total length 165 millim.

Andaman Islands.

### 88. *Typhlops ater*.

*Typhlops ater*, Schleg. *Abbild.* p. 39, pl. xxxii. figs. 29-31 (1844); *Dum. & Bibr.* vi. p. 312 (1844); *Peters, Mon. Berl. Ac.* 1865, p. 263, pl. —. fig. 4; *Peters & Doria, Ann. Mus. Genova*, xiii. 1878, p. 385.

*Anilius*? *ater*, Gray, *Cat. Liz.* p. 136 (1845).

Snout rounded; nostrils lateral. Rostral elongate, oval, extending to the level of the eyes; nasal completely divided, the cleft proceeding from the second labial; a præocular, separated from the labials by a subocular; ocular in contact with third and fourth upper labials; eyes distinct, under the suture between the præocular and the ocular; four upper labials. Diameter of body 68 times in the total length; tail about twice as long as broad, with a very small spine. 18 scales round the body. Black above, reddish brown inferiorly; lower surface of head and anal region white.

Total length 136 millim.

Java; Ternate.

### 89. *Typhlops disparilis*.

*Typhlops disparilis*, Jan, *Icon. Gén.* p. 8, l. 1, pls. v. & vi. fig. 6 (1860). *Diaphorotyphlops disparilis*, *Peters, Sitz. Ges. naturf. Fr.* 1881, p. 70.

Snout round, moderately prominent; nostrils lateral. Rostral narrow, extending to the level of the eyes; nostril between two nasals, the anterior of which is small and in contact with the first and second labials; a præocular, larger than the ocular, in contact with the second and third labials; a subocular, separating the ocular from the labials; eyes distinguishable; upper head-scales slightly enlarged; four upper labials. Diameter of body about 50 times in the total length; tail as long as broad, ending in a spine. 18 scales round the body. Uniform brownish.

Total length 300 millim.

*Hab.* —?

### 90. *Typhlops microstomus*.

*Typhlops microstomus*, Cope, *Proc. Ac. Philad.* 1866, p. 125; *Bocourt, Miss. Sc. Mex., Rept.* p. 500 (1882).

Snout rounded, flattened and very prominent; nostrils lateral. Præocular present, broader than the nasal, in contact with the second labial; a subocular, separating the ocular from the labials; eyes



distinguishable, under the suture between the præocular and the ocular; supraocular larger than ocular; four upper labials. Body slender, the scales in 18 rows; tail very short. Yellowish olive, brighter yellow posteriorly.

Total length 275 millim.

Yucatan.

### 91. *Typhlops inornatus*. (PLATE III. fig. 6.)

*Typhlops inornatus*, *Bouleng: Ann. & Mag. N. II.* (6) i. 1888, p. 344.

Snout depressed, rounded, moderately projecting; nostrils lateral. Rostral nearly half the width of the head, not extending to the level of the eyes; nostril between two nasals, the anterior in contact with the first and second labials; præocular present, larger than the ocular, in contact with the second, third, and fourth labials; ocular separated from the labials by a subocular; eyes distinguishable; upper head-scales feebly enlarged; four upper labials, third largest. Diameter of body 43 times in the total length; tail a little longer than broad, ending in a spine. 20 scales round the body. Uniform black; borders of mouth and end of tail yellowish.

Total length 170 millim.

New Guinea.

a. Sogere, 1750 feet. H. O. Forbes, Esq. [C.]. (Type.)

### 92. *Typhlops pallidus*.

*Letheobia pallida*, *Cope, Proc. Ac. Philad.* 1868, p. 322.

Snout rounded, strongly projecting; nostrils inferior. Rostral very large, its posterior border broadly truncate and in contact with the supraoculars and the præfrontal; nostril close to the rostral, between two nasals, the anterior of which is in contact with the first and second labials; a præocular, in contact with the second and third labials; eyes not distinguishable; ocular small, separated from the labials by a subocular, and in contact with the nasal; four upper labials. Diameter of body 58 to 60 times in the total length; tail as long as broad, ending in a spine. 22 scales round the body. Colourless.

Total length 180 millim.

Zanzibar.

a. Ad. Zanzibar. Sir J. Kirk [C.].  
b. Ad. Zanzibar. Sir Lambert Playfair [P.].

### 93. *Typhlops lumbriciformis*.

*Onychocephalus (Letheobia) lumbriciformis*, *Peters, Mon. Berl. Ac.* 1874, p. 377.

Snout strongly projecting, with sharp horizontal edge; nostrils inferior. Rostral very large, its posterior border in contact with

the præfrontal, which is large; nostril close to the rostral, between two nasals, the anterior of which is in contact with the first labial; præocular very large, in contact with the second, third, and fourth labials; ocular in contact with the nasal, separated from the fourth labial by a subocular; eyes hidden; four upper labials. Diameter of body 60 times in the total length; tail rounded, a little longer than broad. 18 scales round the body. Colourless.

Total length 360 millim.

Zanzibar.

a. Ad. Zanzibar. Sir J. Kirk [C].

#### 94. *Typhlops cæcus*.

*Onychocephalus cæcus*, *A. Dum. Rev. et Mag. Zool.* 1856, p. 462, pl. xxi. fig. 4.

*Typhlops cæcus*, *Jan, Icon. Gén.* p. 31, l. 4, pls. iv. & v. fig. 7 (1864).

*Letheobia cæca*, *Cope, Proc. Acad. Philad.* 1868, p. 322.

Snout strongly projecting, with sharp horizontal edge; nostrils inferior. Rostral very large, its posterior border broadly truncate and in contact with the very broad præfrontal; nostril touching the rostral, the nasal cleft very short and proceeding from the side of the rostral; præocular present, large, in contact with the second and third labials; ocular small, smaller than the subocular, by which it is separated from the labials, in contact with the nasal; eyes not distinguishable; four upper labials. Diameter of body 74 times in the total length; tail as long as broad, ending in a spine. 22 scales round the body. Pale brownish.

Total length 370 millim.

Gaboon and Sierra Leone.

a. Ad. Sierra Leone. Dr. A. Günther [P].

#### 95. *Typhlops newtonii*.

*Typhlops (Onychocephalus) newtoni*, *Bocage, Journ. Sc. Lisb.* (2) ii. 1801, p. 61.

Closely allied to the preceding, but rostral rounded behind instead of truncate, præocular and ocular subequal in size, and scales in 28 rows. Uniform yellowish white.

Total length 400 millim.; diameter of body 8; length of tail 6.

Ilheo das Rolas, south of St. Thomé, Gulf of Guinea.

#### 96. *Typhlops unitæniatus*.

*Typhlops (Letheobia) unitæniatus*, *Peters, Mon. Berl. Ac.* 1878, p. 205, pl. ii. fig. 5.

Snout very prominent, hooked, with sharp horizontal edge and inferior nostrils. Rostral very large, extending posteriorly far beyond

the level of the eyes; nasal extending over the eye, in contact with the ocular, which is small; a præocular and a subocular; eyes distinguishable; four upper labials. Diameter of body 62 or 63 times in the total length; tail very short. 25 scales round the middle of the body, 27 anteriorly. Black, with a yellow vertebral stripe three scales wide; a stripe on the rostral, lower surface of snout, and lips brownish yellow.

Total length 375 millim.  
Somaliland and Zanzibar.

a. Ad. Mombasa. Mr. Last [C.].

### 97. *Typhlops acutus*.

*Onychocephalus acutus*, *Dum. & Bibr.* vi. p. 333 (1844); *Günth. Rept. Brit. Ind.* p. 177, pl. xiv. fig. A (1864); *Peters, Mon. Berl. Ac.* 1865, p. 263; *Theob. Cat. Rept. Brit. Ind.* p. 126 (1876).

*Typhlops russellii* (*non Schleg.*), *Gray, Cat. Liz.* p. 132 (1845).

*Onychocephalus westermanni*, *Lütke. Vid. Meddel.* 1862, p. 306, pl. i. fig. 5.

*Typhlops excipiens*, *Jan, Icon. Gén.* 9, pl. i. fig. 5 (1865).

*Gryptotyphlops acutus*, *Peters, Sitzb. Ges. nat. Freunde*, 1881, p. 70.

*Typhlops acutus*, *Bouleng. Faun. Ind., Rept.* p. 242 (1890).

Snout pointed and hooked, with sharp horizontal edge and inferior nostrils. Rostral very large, extending posteriorly far beyond the level of the eyes; nostrils close to the rostral; nasal extending over the eye, in contact with and nearly as broad as the ocular; a præocular and a subocular; eyes distinguishable; præfrontal and supraoculars much broader than the scales on the body; four upper labials. Diameter of body 40 to 60 times in the total length; tail as long as or shorter than broad, terminating in a spine. 28 to 34 scales round the middle of the body, 30 to 36 anteriorly. Pale brown above, each scale with or without a yellowish transverse streak; yellowish inferiorly.

Total length 610 millim.  
India.

a. Ad.	India.	Dr. P. Russell [P.]. (Type of <i>T. russellii</i> .)
b. Yg.	Aska, Ganjam.	E. A. Minchin, Esq. [P.].
c. Ad.	Belgaum.	Dr. Leith [P.].
d-f. Hgr.	Bombay.	Dr. Leith [P.].
g. Ad.	Matheran.	Dr. Leith [P.].
h-i. Ad.	Madras Presidency.	T. C. Jerdon, Esq. [P.].
k. Ad.	Malabar.	Sir A. Smith [P.].
l, m. Ad. & hgr.	Malabar.	Col. Beddome [C.].
n. Ad.	Nellumbar.	Col. Beddome [C.].
		( <i>O. malabaricus</i> , Bedd.)
o. Ad.	Palghat Hills.	Col. Beddome [C.].
p. Hgr.	Anamallays.	Col. Beddome [C.].
q. Ad.	Trichinopoly.	Col. Beddome [C.].

## 3. TYPHLOPHIS.

*Cephalolepis* (*non Rafin.*), *Dum. & Bibr.* vi. p. 314 (1844); *Jan, Icon. Gén. Ophid.* p. 33 (1864).

*Typhlophis*, *Peters, Sitzb. Ges. naturf. Freunde*, 1881, p. 69.

Head covered with uniform small scales; nostril between two very small nasals; rostral very small, not extending to the upper surface of the snout.

Brazil and Guiana.

1. *Typhlophis squamosus*.

*Typhlops squamosus*, *Schleg. Abbild.* p. 36, pl. xxxii. figs. 9-12 (1844).

*Cephalolepis leucocephalus*, *Dum. & Bibr.* vi. p. 315 (1844); *Jan, op. cit.* l. 1, pls. v. & vi. fig. 11 (1860).

*Anilius? squamosus*, *Gray, Cat. Liz.* p. 136 (1845).

*Typhlophis squamosus*, *Peters, l. c.*

Snout rounded, feebly projecting. Eyes distinguishable. Diameter of body about 40 times in the total length; tail as long as broad, ending in a spine. 24 scales round the body. Brown or black; snout and end of tail yellowish.

Total length 130 millim.

Brazil and Guiana.

## Fam. 2. GLAUCONIIDÆ.

*Scolécophides Catodoniens*, *Duméril & Bibron, Erp. Gén.* vi. p. 317, 1844.

*Typhlopsidæ*, part. (*Glauconiina*), *Gray, Cat. Liz.* p. 130, 1845.

*Opotérodontes Catodoniens*, *Duméril, Mém. Ac. Sc.* xxiii. p. 423, 1853.

*Typhlopsidæ*, part., *Jan, Elenco sist. Ofid.* p. 9, 1863.

*Catodonta*, *Cope, Proc. Ac. Philad.* 1864, p. 230.

*Stenostomi*, *Peters, Sitzb. Ges. naturf. Freunde*, 1881, p. 68, and *Reise n. Mossamb.* iii. p. 100, 1882.

*Stenostomidæ*, *Cope, Proc. Amer. Philos. Soc.* xxiii. p. 481, 1886.

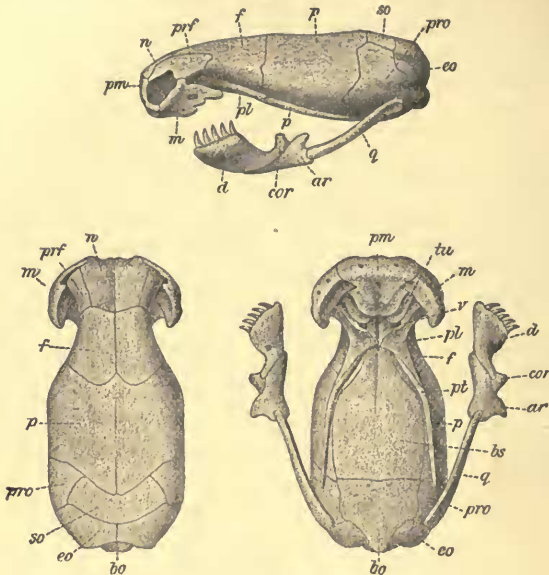
*Glauconiidæ*, *Boulenger, Faun. Ind., Rept.* p. 242, 1890.

Cranial bones solidly united; no ectopterygoid; pterygoid not extending to quadrate or mandible; no supratemporal; præfrontal forming a suture with nasal; maxillary bordering the mouth, forming a suture with the præmaxillary, præfrontal, and frontal, toothless; no teeth on palate. Lower jaw toothed; coronoid bone present. Pelvis present, consisting of ilium, pubis, and ischium; the latter forming a ventral symphysis; a rudimentary femur. Body covered with uniform cycloid scales; eyes under the shields.

Africa, South-western Asia, Southern North America, Tropical America.

The Snakes of this Family bear a very close superficial resemblance to the *Typhlopidae*, from which they may be distinguished externally

Fig. 2.

Skull of *Glauconia macrolepis* (after Peters).

by the character of the nasal shield which, whether single or divided, borders the lip, and by the enlarged præanal.

### 1. ANOMALEPIS.

*Anomalepis*, Jan, *Arch. f. Nat.* 1861, p. 6, and *Arch. Anat. Zool. Phys.* i. 1862, p. 185, and *Icon. Gén. Ophid.* p. 6 (1864); Peters, *Sitzb. Ges. naturf. Freunde*, 1881, p. 69; Bocourt, *Miss. Sc. Mex.*, *Rept.* p. 503 (1882).

A pair of large præfrontals and a frontal; nasal large and lateral, semidivided, bordering the lip. Præanal scales enlarged.

Mexico.

This genus was referred by Jan to the *Typhlopidae*, but it does not appear from his descriptions that he ever examined the dentition. I therefore follow Garman (*N. Am. Rept.* p. 129, 1883) in placing it in the present family, as, judging from external characters, it appears to stand in the same relation to *Glauconia* as *Helminthophis* to *Typhlops*.



1. *Anomalepis mexicana*.

*Anomalepis mexicanus*, *Jan, Ill. cc. Icon.* l. 1, pls. v. & vi. fig. 1 (1860);  
*Bocourt, l. c.*

Snout rounded, moderately prominent; nostrils lateral; rostral rather small; præfrontals and frontal subequal in size, the former forming a median suture; supraoculars well developed; eye distinguishable under the ocular; two superposed præoculars, the lower in contact with the two labials; two small suboculars; two upper labials. Diameter of body 32 times in the total length; tail broader than long, rounded. 22 scales round the body; a pair of enlarged præanals. Reddish brown, lighter inferiorly, the scales with a yellowish-white border.

Total length 130 millim.

Mexico.

## 2. GLAUCONIA.

*Stenostoma* (*non Latr.*), *Wagler, in Spix, Serp. Bras.* p. 68 (1824);  
*Dum. & Bibr. Erp. Gén.* vi. p. 322 (1844); *Jan, Icon. Gén. Ophid.*  
p. 34 (1864); *Peters, Sitzb. Ges. naturf. Freunde*, 1881, p. 71, and  
*Reise n. Mossamb.* iii. p. 102 (1882); *Bocourt, Miss. Sc. Mex.,*  
*Rept.* p. 504 (1882).

*Typhlops*, part., *Wagler, Syst. Amph.* p. 195 (1830).

*Catodon* (*non L.*), *Dum. & Bibr.* vi. p. 318.

*Glaucania*, *Gray, Cat. Liz.* p. 139 (1845); *Bouleng. Faun. Ind., Rept.*  
p. 243 (1890); *Cope, Proc. U. S. Nat. Mus.* xiv. 1892, p. 589.

*Epictia*, *Gray, l. c.*

*Rena*, *Baird & Gir. Cat. N. Am. Rept.* p. 142 (1853); *Cope, l. c.*  
p. 590.

*Sabrina*, *Girard, Proc. Ac. Philad.* 1857, p. 181.

*Rhamphostoma* (*non Wagl.*), *Jan, Arch. Zool. Anat. Phys.* i. 1862,  
p. 190.

*Tricheilostoma*, *Jan, l. c.*

*Tetracheilostoma*, *Jan, l. c.* p. 191.

*Siagonodon*, *Peters, Sitzb. Ges. naturf. Fr.* 1881, p. 71; *Bocourt, l. c.*  
p. 507.

*Leptotyphlops*, *Stejneger, Proc. U. S. Nat. Mus.* xiv. 1891, p. 501.

Rostral, nasal, and ocular large; frontal small, scale-like; nasal divided or semidivided, extending on each side of the rostral to the upper surface of the head, bordering the lip. Præanal scale enlarged.

Africa, South-western Asia, America.

*Synopsis of the Species.*

- I. Supraocular present, the ocular being separated from its fellow, on the top of the head, by three shields.
  - A. Ocular bordering the lip, separated from the lower part of the nasal by a single labial.
    1. Snout hooked, the præoral portion flat or concave inferiorly.

a. Diameter of body more than 100 times in the total length.

1. *macrorhynchus*,  
[p. 61.]

b. Diameter of body less than 100 times in the total length.

- Snout rounded ..... 2. *distanti*, p. 62.  
Snout with angular horizontal edge ..... 3. *rostrata*, p. 62.

2. Snout not hooked.

a. First labial reaching, or nearly reaching, the eye.

- Anterior labial broader than the lower border of the ocular ..... 4. *affinis*, p. 62.  
Anterior labial narrower than the lower border of the ocular; nasal completely divided into two ..... 5. *albifrons*, p. 63.  
Anterior labial narrower than the lower border of the ocular; nasal semidivided. 6. *goudotii*, p. 64.

b. First labial not reaching the eye.

a. Supraocular nearly twice as broad as long, followed by a single transversely enlarged shield.

- Nasal divided; length of tail 9 times in the total length ..... 7. *emini*, p. 64.  
Nasal semidivided; length of tail 13 times in the total ..... 8. *signata*, p. 64.

β. Supraocular small.

\* Diameter of body 40 to 57 times in the total length; rostral not twice as broad as the nasal, not extending to the level of the posterior border of the eyes.

† First labial smaller than the lower part of the nasal; first median head-shield considerably longer than broad .... 9. *dimidiata*, p. 64.

†† First labial smaller than the lower part of the nasal; first median head-shield not or but slightly longer than broad.

- Length of tail 17 to 20 times in the total length ..... 10. *duleis*, p. 65.  
Length of tail 25 to 30 times in the total length ..... 16. *brevicauda*, p. 67.  
Length of tail 8 to 13 times in the total length ..... 17. *nigricans*, p. 67.

††† First labial as large as the lower part of the nasal ..... 11. *narirostris*, p. 65.

\*\* Diameter of body 60 to 90 times in the total length ;  
rostral not extending to the level of the posterior  
border of the eyes.

† Nasal semidivided.

First labial not one fourth the size of the  
second . . . . . 12. *cairi*, p. 65.

First labial nearly half the size of the second. 13. *fitzingeri*, p. 66.

†† Nasal completely divided into two.

Rostral nearly twice as broad as the nasal. 14. *blanfordii*, p. 66.

Rostral but little broader than the nasal . . 15. *longicauda*, p. 66.

\*\*\* Diameter of body 47 to 80 times in the total length ;  
rostral extending to the level of the posterior  
border of the eyes.

Rostral not twice the width of the nasal . . 18. *conjuncta*, p. 67.

Rostral at least twice the width of the nasal. 19. *scutifrons*, p. 68.

B. Ocular bordering the lip, separated from the lower part of the  
nasal by two labials.

1. Supraocular large, as broad as the shields following.  
20. *sundevallii*, p. 68.

2. Supraocular small.

Second labial small, not larger than first . . 21. *bicolor*, p. 69.

Second labial larger than first, not reaching  
the eye . . . . . 22. *macrolepis*, p. 69.

Second labial larger than first, reaching the  
eye . . . . . 23. *myopica*, p. 69.

C. Ocular not reaching the lip.

Three upper labials, second largest . . . . . 24. *dissimilis*, p. 70.

Four upper labials, fourth largest . . . . . 25. *bilineata*, p. 70.

II. No supraocular, the ocular being separated from its fellow, on  
the top of the head, by a single shield.

First labial reaching the eye . . . . . 26. *humilis*, p. 70.

First labial not reaching the eye . . . . . 27. *septemstriata*, p. 71.

### 1. *Glauconia macrorhynchus*.

*Stenostoma macrorhynchum*, *Jan, Arch. Zool. Anat. Phys.* i. 1862,  
p. 190, and *Icon. Gén.* p. 39, l. 1, pls. v. & vi. fig. 12 (1864).

*Glauconia macrorhynchus*, *Bouleng. Ann. & Mag. N. H.* (6) vi. 1890,  
p. 92.

Snout prominent, hooked, the præoral portion concave inferiorly ;  
supraocular present, small ; rostral extending to the level of the  
eyes ; nasal completely divided ; ocular bordering the lip, between

two labials, the first of which is very small. 14 scales round the body. Diameter of body 113 times in the total length; length of tail 10 times. Colourless.

Total length 170 millim.

Nubia, Euphrates (?).

a-b. Euphrates Expedition.

### 2. *Glauconia distanti*.

*Glauconia distanti*, Bouleng. in *Distant, Natur. in the Transvaal*, p. 175, fig. (1892).

Snout rounded, projecting beyond the mouth, slightly hooked, the præoral portion concave inferiorly; supraocular present; rostral shield very large, extending posteriorly far beyond the level of the eyes, its upper portion nearly as broad as long and covering almost the entire upper surface of the snout and crown; nasal completely divided into two, the lower part very small; ocular bordering the lip, between two labials, the anterior of which is very small; five lower labials. 14 scales round the body. Diameter of body 65 times in the total length; length of tail 12 times. Uniform blackish, the borders of the scales lighter.

Total length 130 millim.

Transvaal.

a. Ad. Pretoria. W. L. Distant, Esq. [P.]. (Type.)

### 3. *Glauconia rostrata*.

*Stenostoma rostratum*, *Bocage, Journ. Sc. Lisb.* xi. 1886, p. 173.

*Glauconia rostrata*, *Bouleng. Ann. & Mag. N. II.* (6) vi. 1890, p. 92.

Snout prominent, slightly hooked, with sharp horizontal edge; supraocular present; rostral broad, its posterior extremity truncate and extending beyond the level of the eyes; nasal completely divided; ocular bordering the lip, between two labials. 14 scales round the body. Diameter of body 64 times in the total length; length of tail 16 times. Light brown above, the borders of the scales lighter.

Total length 192 millim.

Benguela and Angola.

a. Hgr. Angola. Lieut. Cameron [P.].

### 4. *Glauconia affinis*. (PLATE III. fig. 7.)

*Stenostoma affine*, *Bouleng. Ann. & Mag. N. II.* (5) xiii. 1884, p. 396.

Snout rounded; supraocular present, small; rostral not extending quite to the level of the eyes; nasal completely divided into two; ocular bordering the lip, between two labials, the anterior of which reaches the eye and is broader than the lower part of the ocular; six lower labials. 14 scales round the body. Diameter of body

51 times in the total length; length of tail 13 times. Brown above, each scale darker in the centre; whitish inferiorly.

Total length 205 millim.

Venezuela.

a. Ad. Tachira, Venezuela. (Type.)

### 5. *Glauconia albifrons*.

*Stenostoma albifrons*, *Wagl. in Spir, Serp. Bras.* p. 68, pl. xxv. fig. 3 (1824); *Dum. & Bibr. vi.* p. 327 (1844); *d'Orb. Voy. An. MÉR. v., Rept.* p. 9, pl. vi. figs. 1-6 (1847); *Jan, Icon. Gén.* p. 34, l. 2, pls. v. & vi. fig. 1 (1864); *Cope, Journ. Ac. Philad.* (2) viii. 1876, p. 128; *Bocourt, Miss. Sc. Mex., Rept.* p. 505, pl. xxix. fig. 10 (1882).

*Typhlops albifrons*, *Gray, Griff. A. K. ix. Syn.* p. 77 (1831).

— *undecimstriatus*, *Schleg. Abbild.* p. 36 (1844).

— *tesselatum*, *Tschudi, Faun. Per., Herp.* p. 46 (1845).

*Epictia undecimstriata*, *Gray, Cat. Liz.* p. 140 (1845).

*Stenostoma fallax*, *Peters, Mon. Berl. Ac.* 1857, p. 402.

*Sabrina tessellata*, *Girard, Proc. Ac. Philad.* 1857, p. 181.

*Stenostoma melanosterna*, *Cope, Proc. Ac. Philad.* 1862, p. 350.

— *phenops*, *Cope, Journ. Ac. Philad.* (2) viii. 1876, p. 128.

Snout rounded; supraocular present, large, in contact with or separated from the first labial; rostral extending hardly to the level of the eyes; nasal completely divided; ocular bordering the lip, between two labials; six lower labials. 14 scales round the body. Diameter of body 45 to 55 times in the total length; length of tail 15 to 21 times. Brown, lighter beneath, each scale with lighter outer edges, forming more or less distinct longitudinal lines; forehead, lips, and end of tail usually white.

Total length 275 millim.

Tropical America, from Tehuantepec and the Lesser Antilles to Peru and Argentina.

a. Hgr.	Tehuantepec.	
b. Hgr.	Santo Domingo de Guzman.	Dr. A. C. Buller [C.].
c-e. Hgr.	Ruatan, S. Mexico.	F. D. Godman & O. Salvin, Esqs. [P.].
f-g. Hgr. & yg.	Jalapa.	Mr. Hoege [C.].
h. Yg.	Venezuela.	
i-k. Ad.	Trinidad.	Sir A. Smith [P.].
l-m. Hgr.	Grenada.	
n. Hgr.	Antigua.	
o. Ad.	Cayenne.	
p. Hgr.	Santa Martha, Brazil.	
q. Ad.	Corumba, Matto Grosso.	S. Moore, Esq. [P.].
r. Ad.	Palmeira, Parana.	Dr. G. F. Grillo [C.].
s. Ad.	Santarem, Upper Amazon.	W. Bates, Esq. [C.].
t. Ad.	Moyobamba, E. Peru.	A. H. Roff, Esq. [C.].
u. Yg.	Lima.	C. Darwin, Esq. [P.].
v. Yg.	Lima.	Prof. W. Nation [P.].
w, x-y. Ad.	Peru.	
z. Hgr.	Dep. of Soriano, Uruguay.	R. Havers, Esq. [P.].
a-e. Ad. & yg.	S. America.	E. Cook, Esq. [P.].



6. *Glauconia goudotii*.

*Stenostoma goudotii*, *Dum. & Bibr.* vi. p. 330 (1844); *Jan, Icon. Gén.* p. 35, l. 2, pls. v. & vi. fig. 2 (1864).

Snout rounded; supraocular present; rostral extending to between the eyes; nasal semidivided; ocular bordering the lip, between two labials, the anterior of which reaches the eye. 14 scales round the body. Length of tail 21 times in the total length. Blackish, each scale edged with lighter.

Total length 145 millim.

Magdalena Valley, Colombia.

7. *Glauconia emini*. (PLATE III. fig. 8.)

*Glauconia emini*, *Bouleng. Ann. & Mag. N. H.* (6) vi. 1890, p. 91.

Snout rounded; supraocular large, nearly twice as broad as long, followed by a single large transverse shield; rostral a little broader than the nasal, not extending quite to between the eyes; nasal completely divided; ocular bordering the lip, between two labials, the anterior of which equals the lower portion of the nasal in size; six lower labials. 14 scales round the body. Diameter of body 55 times in the total length; length of tail 9 times. Uniform blackish.

Total length 110 millim.

Central Africa.

a-b. Ad.	Karagwe, Victoria Nyanza.	Dr. Emin Pasha [P.] (Types.)
c. Ad.	Niomkolo, Tanganyika.	A. Carson, Esq. [P.]

8. *Glauconia signata*.

*Stenostoma signatum*, *Jan, Arch. Zool. Anat. Phys.* i. 1862, p. 188, and *Icon. Gén.* p. 36, l. 2, pls. v. & vi. fig. 3 (1864).

Snout rounded; supraocular present, large, followed by a single large transverse shield; rostral extending to between the eyes; nasal semidivided; ocular bordering the lip, between two labials, the anterior of which is small and does not reach the eye. 14 scales round the body. Diameter of body 65 times in the total length, length of tail 13 times. Blackish, dorsal scales edged with white.

Total length 130 millim.

*Hab.* — ?

9. *Glauconia dimidiata*.

*Stenostoma dimidiatum*, *Jan, Arch. Zool. Anat. Phys.* i. 1862, p. 188, and *Icon. Gén.* p. 36, l. 2, pls. v. & vi. fig. 4 (1864).

Snout rounded; supraocular present, small, not larger than the median head-shield, which is considerably longer than broad; rostral extending to the level of the eyes; nasal completely divided

into two; ocular bordering the lip, between two labials, the anterior of which does not reach the eye. 14 scales round the body. Diameter of body 47 times in the total length, tail 14 times. Pale reddish brown above, the scales edged with white.

Total length 280 millim.

Brazil.

#### 10. *Glauconia dulcis*.

*Rena dulcis*, *Baird & Gir. Cat. N. Amer. Rept.* p. 142 (1853), and *Rep. Explor. Surv.* x. 1859, pl. xxxiii. fig. 100.

*Stenostoma dulce*, *Cope, Proc. Ac. Philad.* 1861, p. 305; *Jan, Arch. Zool. Anat. Phys.* i. 1862, p. 189, and *Icon. Gén.* p. 36, l. 2, pls. v. & vi. fig. 5 (1864); *Bocourt, Miss. Sc. Mex., Rept.* p. 506, pl. xxix. fig. 8 (1882); *Garman, N. Am. Rept.* i. pp. 5, 130 (1883).

— *rubellum*, *Garman, l. c.* p. 130.

? *Leptotyphlops dulcis*, *Stejneger, Proc. U. S. Nat. Mus.* xiv. 1891, p. 501.

*Glauconia dulcis*, *Cope, Proc. Ac. Philad.* xiv. 1892, p. 590.

Snout rounded; supraocular present, small; rostral extending to the level of the eyes; nasal completely divided into two; ocular bordering the lip, between two labials, the anterior of which does not reach the eye; five lower labials. 14 scales round the body. Diameter of body 44 to 60 times in the total length, length of tail 17 to 20 times. Pale brown above, white below.

Total length 220 millim.

Florida, Texas, Mexico.

*a-d, e.* Ad. & hgr. Duval County, Texas. W. Taylor, Esq. [C.].

#### 11. *Glauconia narirostris*.

*Stenostoma narirostre*, *Peters, Mon. Berl. Ac.* 1867, p. 708, pl. —. fig. 2.

*Glauconia narirostris*, *Bouleng. Ann. & Mag. N. II.* (6) vi. 1890, p. 92.

Snout rounded; supraocular present, small; rostral hardly as broad as the nasal, extending to the level of the eyes; nasal completely divided into two, the nostril close to the rostral; ocular bordering the lip, between two labials, the anterior of which equals the lower part of the nasal in size and does not reach the eye; six lower labials. 14 scales round the body. Diameter of body 49 times in the total length, length of tail  $8\frac{1}{2}$  times. Brown above, whitish inferiorly.

Total length 195 millim.

Lagos, West Africa.

*a.* Ad. W. Africa.

#### 12. *Glauconia cairi*.

*Stenostoma cairi*, *Dum. & Bibr.* vi. p. 323 (1844); *Jan, Icon. Gén.* p. 37, l. 2, pls. v. & vi. fig. 6 (1864).

*Glauconia cairi*, *Bouleng. Ann. & Mag. N. II.* (6) vi. 1890, p. 92.

Snout rounded; supraocular present, small; rostral extending to the level of the eyes; nasal semidivided; ocular bordering the lip, between two labials, the first of which is extremely small, not one fourth the size of the second; five lower labials. 14 scales round the body. Diameter of body 65 to 90 times in the total length, length of tail 14 or 15 times. Pale reddish or purplish brown above, whitish beneath.

Total length 190 millim.; reaches to 235 millim.

Egypt.

a. Ad.	Island of Rhoda, near Cairo.	Dr. J. Anderson [P.].
b-c. Ad.	Luxor.	Dr. J. Anderson [P.].
d. Hgr.	Thebes.	Prof. Peters [P.].

### 13. *Glauconia fitzingeri*.

*Stenostoma fitzingeri*, Jan, *Arch. Zool. Anat. Phys.* i. 1862, p. 189, and *Icon. Gén.* p. 37, l. 2, pls. v. & vi. fig. 7 (1864).

Snout rounded; supraocular present, small; rostral extending to the level of the eyes; nasal semidivided; ocular bordering the lip, between two labials, the anterior of which does not reach the eye. 14 scales round the body. Diameter of body 80 times in the total length, length of tail 13 times. Greyish, lighter inferiorly.

Total length 160 millim.

Rhodes.

### 14. *Glauconia blanfordii*.

*Glauconia blanfordii*, *Bouleng. Faun. Ind., Rept.* p. 243, fig. (1890).

Snout rounded; supraocular present, small; rostral nearly twice as broad as the nasal, reaching nearly the level of the eyes; nasal completely divided into two; ocular bordering the lip, between two labials, the first of which is very small; five lower labials. 14 scales round the body. Diameter of body 60 to 70 times in the total length, length of tail 12 to 14 times. Pale brownish.

Total length 240 millim.

Sind.

a-e. Ad. & yg.	Sind.	Dr. Leith [P.]. (Types.)
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### 15. *Glauconia longicauda*.

*Stenostoma longicauda*, *Peters, Mon. Berl. Ac.* 1854, p. 621, and *Reise n. Mossamb.* iii. p. 102, pl. xv. fig. 5 (1882).

*Glauconia longicauda*, *Bouleng. Ann. & Mag. N. H.* (6) vi. 1890, p. 92.

Snout rounded; supraocular present, small, followed by a single transversely enlarged (postocular) shield; rostral extending to the level of the eyes; nasal completely divided into two; ocular bordering the lip, between two labials, the first of which is very small. 14

scales round the body. Diameter of body 70 times in the total length, length of tail 9 times. Flesh-colour.

Total length 208 millim.

Mozambique.

### 16. *Glauconia brevicauda*.

*Stenostoma brevicauda*, *Bocage, Journ. Sc. Lisb.* xi. 1887, p. 194.

*Glauconia brevicauda*, *Bouleng. Ann. & Mag. N. H.* (6) vi. 1890, p. 92.

Resembles *S. nigricans*, but differs in the narrower rostral and much shorter tail, which measures hardly twice its basal diameter and is contained 25 to 30 times in the total length. Diameter of body 57 times in the total length. Chocolate-brown above, greyish white inferiorly.

Total length 170 millim.

Dahomey and Ashantee, West Africa.

a. Ad.

Ashantee.

### 17. *Glauconia nigricans*.

*Typhlops nigricans*, *Schleg. Abbild.* p. 38, pl. xxxii. figs. 21-24 (1844).

*Stenostoma nigricans*, *Dum. & Bibr.* vi. p. 326 (1844).

*Glauconia nigricans*, *Gray, Cat. Liz.* p. 139 (1845).

*Stenostoma nigricans*, part., *Smith, Ill. Zool. S. Afr., Rept.* pls. li. fig. 4, & liv. fig. 25 (1846); *Jan, Icon. Gén.* p. 38, l. 2, pls. v. & vi. fig. 8 (1864); *Peters, Reise n. Mossamb.* iii. p. 102 (1882).

Snout rounded; supraocular present, small; rostral as broad as or a little broader than the nasal, extending to the level of the anterior border of the eyes; nasal completely divided into two; ocular bordering the lip, between two labials, the anterior of which is very small; five lower labials. 14 scales round the body. Diameter of body 40 to 53 times in the total length, length of tail 8 to 13 times. Brown or blackish, the scales edged with lighter.

Total length 160 millim.

South Africa.

a. Ad.

Cape of Good Hope.

Sir A. Smith [P.].

b. Ad.

Cape of Good Hope.

Dr. J. Leo [P.].

c. Ad.

Port Elizabeth.

A. E. Craven, Esq. [P.].

d. Several specs.,

Port Elizabeth.

J. P. M. Weale, Esq. [P.].

ad. & hgr

e-f. Ad. & hgr.

Port Elizabeth.

H. A. Spencer, Esq. [P.].

### 18. *Glauconia conjuncta*.

*Stenostoma nigricans*, part., *Smith, Ill. Zool. S. Afr., Rept.* pl. liv. fig. 21 (1846); *Jan, Icon. Gén.* p. 38 (1864); *Peters, Reise n. Mossamb.* iii. p. 102 (1882).

— *conjunctum*, *Jan, Arch. Zool. Anat. Phys.* i. 1861, p. 189, and *Icon. Gén.* 2, pls. v. & vi. fig. 9 (1861).

‡ *Stenostoma groutii*, *Cope, Journ. Ac. Philad.* (2) viii. 1876, p. 128.  
*Glauconia conjuncta*, *Bouleng. Ann. & Mag. N. H.* (6) vi. 1890,  
 p. 92.

This form connects *S. nigricans* with *S. scutifrons*. Rostral not twice the width of the nasal, extending to or slightly beyond the level of the posterior border of the eyes. Diameter of body 47 to 60 times in the total length, length of tail 9 to 12 times.

Total length 155 millim.

South and East Africa.

<i>a-c.</i> Ad. & hgr.	S. Africa.	Sir A. Smith [P.].
<i>d.</i> Ad.	S. Africa.	Dr. Quain [P.].
<i>e.</i> Hgr.	Natal.	E. Howlett, Esq. [P.].
<i>f-g.</i> Ad. & yg.	Kilimanjaro.	F. J. Jackson, Esq. [P.].

### 19. *Glauconia scutifrons*.

*Stenostoma scutifrons*, *Peters, Mon. Berl. Ac.* 1854, p. 621, and 1865, p. 261, pl. —. fig. 5, and *Reise n. Mossamb.* iii. p. 104, pl. xv. fig. 4 (1882).

*Glauconia scutifrons*, *Bouleng. Ann. & Mag. N. H.* (6) vi. 1890, p. 92.

Snout rounded; supraocular present, small; rostral very large, at least thrice as broad as the nasal, extending to the level of the posterior border of the eyes or a little beyond; nasal completely divided into two; ocular bordering the lip, between two labials, the anterior of which is extremely small; five lower labials. 14 scales round the body. Diameter of body 60 to 80 times in the total length, length of tail 12 to 20 times. Brown or blackish above, whitish inferiorly.

Total length 170 millim.

Mozambique, Damaraland, Benguela.

<i>a-b.</i> Ad.	Benguela.	J. J. Monteiro, Esq. [C.].
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### 20. *Glauconia sundevallii*.

*Stenostoma sundevalli*, *Jan, Arch. Zool. Anat. Phys.* i. 1862, p. 191, and *Icon. Gén.* p. 40, l. 2, pls. v. & vi. fig. 11 (1864).

*Glauconia sundevallii*, *Bouleng. Ann. & Mag. N. H.* (6) vi. 1890, p. 92.

Snout rounded; supraocular present, large, as broad as the shield following; rostral not extending quite to the level of the eyes; nasal semidivided; ocular bordering the lip; three labials, two in front of, and one behind, the ocular; second labial twice as large as first, reaching the eye and forming a suture with the supraocular. 14 scales round the body. Diameter of body 42 times in the total length, length of tail  $17\frac{1}{2}$  times. Dark reddish brown above, light greyish inferiorly.

Total length 105 millim.

West Africa.



21. *Glauconia bicolor*.

*Stenostoma bicolor*, *Jan, Icon. Gén.* 1, pl. v. fig. 15 (1860), and p. 40 (1864), and *Arch. Zool. Anat. Phys.* i. 1862, p. 191; *Peters, Arch. f. Nat.* 1862, p. 40; *Boetg. Ber. Senck. Ges.* 1886, p. 59.

— *gracile*, *Jan, op. cit.* pls. v. & vi. fig. 14.

*Glauconia bicolor*, *Bouleng. Ann. & Mag. N. II.* (6) vi. 1890, p. 92.

Snout rounded; supraocular present, small; rostral extending nearly to the level of the eyes; nasal completely divided into two; ocular bordering the lip; three labials, two in front of, and one behind, the ocular; first and second labials very small, subequal in size. 14 scales round the body. Diameter of body 50 to 65 times in the total length, length of tail 20 to 26 times. Dark brown above, yellowish inferiorly.

Total length 125 millim.

Gold Coast.

a. Hgr.

Fantee.

T. E. Bowditch, Esq. [P.].

22. *Glauconia macrolepis*.

*Stenostoma macrolepis*, *Peters, Mon. Berl. Ac.* 1857, p. 402; *Jan, Icon. Gén.* p. 40, l. 2, pls. v. & vi. fig. 10 (1864).

Snout rounded; supraocular present, small; rostral extending to the level of the eyes; nasal completely divided into two; ocular bordering the lip; three labials, two in front of, and one behind, the ocular; second labial not reaching the eye; six lower labials. 14 scales round the body. Diameter of body 41 times in the total length, length of tail 14 (to 15½) times. Dark brown above, lighter beneath, each scale with lighter border.

Total length 290 millim.

Venezuela.

a. Ad.

Venezuela.

23. *Glauconia myopica*.

*Stenostoma myopicum*, *Garman, N. Am. Rept.* p. 6 (1883).

Snout rounded; supraocular present, small; rostral extending to the level of the eyes; nasal completely divided into two; ocular bordering the lip; three labials, two in front of, and one behind, the ocular; second labial reaching nearly the eye; five lower labials. 14 scales round the body. Diameter of body 50 times in the total length, length of tail 16 to 20 times. Pale brown above, whitish inferiorly.

Total length 200 millim.

Mexico.

a. Ad.

Tampico.

Messrs. Godman & Salvin [P.].

b-c. Ad.

Mexico.

24. *Glauconia dissimilis*.

*Stenostoma dissimile*, *Bocage, Journ. Sc. Lisb.* xi. 1886, p. 174.

*Glauconia dissimilis*, *Bouleng. Ann. & Mag. N. H.* (6) vi. 1890, p. 92.

Snout rounded; supraocular present; nasal completely divided; three upper labials, second largest and separating the ocular from the mouth. Diameter of body 42 times in the total length, length of tail  $11\frac{1}{2}$  times.

Total length 104 millim.

White Nile.

25. *Glauconia bilineata*.

*Typhlops bilineatus*, *Schleg. Abbild.* p. 36, pl. xxxii. figs. 5-8 (1844).

*Stenostoma bilineatum*, *Dum. & Bibr.* vi. p. 331 (1844); *Jan, Icon.*

*Gén.* p. 41, l. 2, pls. v. & vi. fig. 12 (1864).

Snout rounded; supraocular present; rostral rather small, narrower than the nasal, not extending to the level of the eyes; nasal completely divided into two; ocular not descending to the lip; four upper labials, fourth largest; six lower labials. 14 scales round the body. Diameter of body 36 times in the total length, length of tail 14 times. Yellowish, each dorsal scale with a large reddish-brown spot; a yellowish dorso-lateral line.

Total length 110 millim.

Guadeloupe, Martinique, Barbados.

a. Ad.

Martinique.

b. Hgr.

Barbados.

Col. Feilden [P.].

26. *Glauconia humilis*.

*Rena humilis*, *Baird & Gir. Cat. N. Am. Rept.* p. 143 (1853);

*Stejneger, Proc. U.S. Nat. Mus.* xiv. 1891, p. 501.

*Stenostoma humile*, *Cope, Proc. Ac. Philad.* 1861, p. 305; *Garman,*

*N. Am. Rept.* p. 130 (1883).

*Catodon dugesii*, *Bocourt, Bull. Soc. Philom.* (7) iv. 1881, p. 81.

*Siagonodon dugesii*, *Bocourt, Miss. Sc. Mex., Rept.* p. 507, pl. xxix. fig. 9 (1882).

*Stenostoma tenuiculum*, *Garman, l. c.* p. 5.

*Rena dugesii*, *Cope, Bull. U.S. Nat. Mus.* no. 32, 1887, p. 64.

— *tenuicula*, *Cope, l. c.* p. 91.

Snout rounded; no supraoculars, the oculars being separated from each other, on the top of the head, by a single shield; rostral extending nearly to the level of the eyes; nasal completely divided into two; ocular bordering the lip, between two labials, the anterior of which nearly reaches the eye; five lower labials. 14 scales round the body. Diameter of body 47 to 55 times in the total length, length of tail 17 (15-23) times. Brown above, whitish inferiorly.

Total length 190 millim.

Arizona, Lower California, and Western Mexico.

a-b. Ad.

Presidio, near Mazatlan.

Mr. Forrer [C.].

### 27. *Glauconia septemstriata*.

*Typhlops septemstriatus*, *Schneid. Hist. Amph.* ii. p. 341 (1801).

*Catodon septemstriatus*, *Dum. & Bibr.* vi. p. 319 (1844).

*Stenostoma septemstriatum*, *Jan, Icon. Gén.* p. 39, l. 1, pls. v. & vi. fig. 13 (1864).

*Siagonodon septemstriatus*, *Peters, Sitzb. Ges. naturf. Freunde*, 1881, p. 71; *Bocourt, Miss. Sc. Mex., Rept.* p. 507 (1882).

Snout rounded; no supraoculars, the oculars being separated from each other, on the top of the head, by a single shield; rostral truncate above, extending to between the eyes; nasal completely divided into two; ocular bordering the lip, between two labials, the anterior of which is very small. 14 scales round the body. Diameter of body 45 times in the total length, length of tail 28 times. Yellowish, with seven black lines along the dorsal scales.

Total length 280 millim.

*Hab.* — ?

### Fam. 3. BOIDÆ.

Constrictores, *Oppel, Ordn. Rept.* p. 49, 1811.

Pythonoidea, *Fitzinger, Neue Classif. Rept.* p. 27, 1826.

Colubri, part., *Boie, Isis*, 1827, p. 510.

Macrostomata, part. (Holodonta, Isodonta, part.), *J. Müller, Zeitschr. f. Physiol.* iv. p. 270, 1831.

Boidæ, part., *Gray, Zool. Miscell.* p. 41, 1842.

Azémiophides Pythoniens, *Duméril & Bibron, Erp. Gén.* vi. p. 358, 1844.

Boidæ, part., *Gray, Cat. Sn.* p. 82, 1849.

Aglyphodontes Holodontiens, part., Aprotérodontiens, part., *Duméril, Mém. Ac. Sc.* xxiii. pp. 424, 428, 1853.

Asinea, part. (Peropoda), *Stannius, Zool. Amph.* p. 6, 1856.

Boæidæ, *Jan, Elenco sist. Ofid.* p. 19, 1863.

Pythonidæ, Boidæ, *Cope, Proc. Ac. Philad.* 1864, p. 230.

Pythonidæ, Erycidæ, *Günth. Rept. Brit. Ind.* pp. 328, 332, 1864.

Peropodes, *Peters, Reise n. Mossamb.* iii. p. 105, 1882.

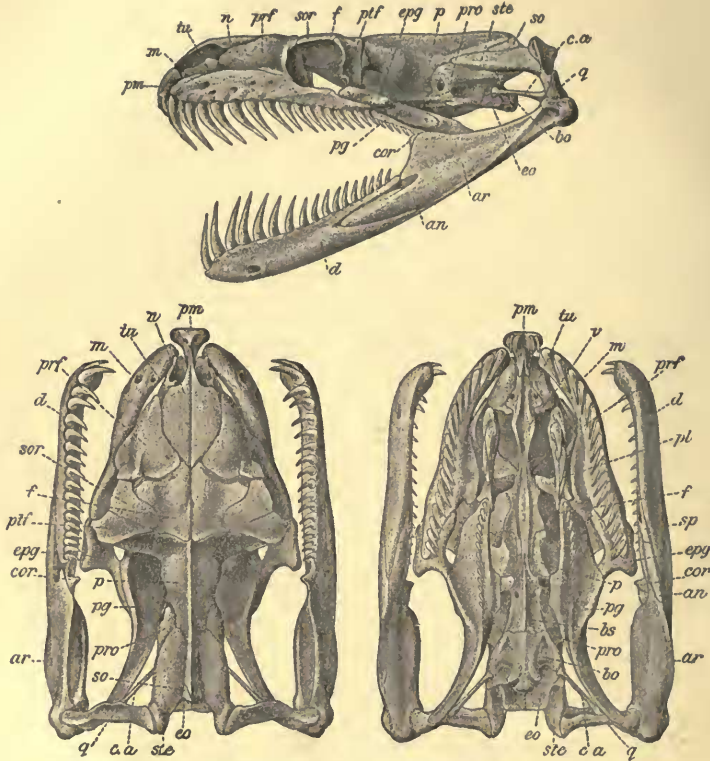
Pythonidæ, Boidæ, Charinidæ, *Cope, Am. Nat.* 1886, p. 294, and *Proc. Amer. Philos. Soc.* xxiii. p. 482, 1886.

Boidæ, *Boulenger, Faun. Ind., Rept.* p. 234, 1890.

Maxillary, palatine, and pterygoid movable; transpalatine present; pterygoid extending to quadrate or mandible; supratemporal present, attached scale-like to cranium, suspending quadrate; præfrontal in contact with nasal. Mandible with coronoid bone. Teeth in both jaws. Vestiges of pelvis and hind limbs, usually terminating in a claw-like spur visible on each side of the vent.

South-eastern Europe, Central and South Asia, Africa, Australia, Western North America, Central and South America, and West Indies.

Fig. 3.

Skull of *Python amethystinus*.

*Synopsis of the Subfamilies and Genera.*

I. Supraorbital bone present . . . . . PYTHONINÆ.

A. Præmaxillary bone toothed; subcaudals mostly in two rows.

1. Tail not or but very slightly prehensile; rostral shield without or with shallow pits.

No labial pits; nostril lateral, in a single nasal; no loreal.

1. *Loxocemus*, p. 74.

Lower labials with pits; nostril lateral, between two nasals.

2. *Nardoa*, p. 75.



Lower labials with pits; nostril supero-lateral, in a semidivided nasal ..... 1. *Liasis*, p. 76.

2. Tail prehensile; rostral and anterior upper labials deeply pitted ..... 4. *Python*, p. 80.

B. Præmaxillary bone toothless.

Palate toothed; labials pitted; tail prehensile, with two rows of subcaudals ..... 5. *Chondropython*, p. 90.

Palate toothed; no labial pits; tail not or but very slightly prehensile, with the subcaudals mostly single.

6. *Aspidites*, p. 91.

Palate toothless; no labial pits; no mental groove; tail not prehensile; subcaudals single ..... 7. *Calabaria*, p. 92.

II. No supraorbital bone; no præmaxillary teeth; subcaudals mostly single ..... BOINÆ.

A. Head distinct from neck; tail more or less prehensile.

1. Anterior teeth very strongly enlarged.

Scales smooth; head with shields; labials without or with shallow pits ..... 8. *Epicrates*, p. 93.

Scales smooth; labials with deep pits. 9. *Corallus*, p. 99.

Scales keeled; no labial pits ..... 10. *Enygrus*, p. 104.

2. Maxillary and mandibular teeth gradually decreasing in size.

a. No enlarged rostral shield; scales strongly keeled.

11. *Trachyboa*, p. 109.

b. An enlarged rostral shield.

a. Scales moderate, in 21 to 29 rows.

One or two pairs of præfrontal shields. 12. *Ungalia*, p. 110.

A large azygous præfrontal shield.... 13. *Ungaliophis*, p. 114.

β. Scales very small.

Scales smooth; nasals in contact behind the rostral.

14. *Eunectes*, p. 115.

Scales smooth; nasals separated by small scales; tail short.

15. *Boa*, p. 116.

Scales keeled; nasals separated by a pair of internasals; tail long.

16. *Casarea*, p. 121.

B. Head not distinct from neck; tail not or but slightly prehensile.

1. Scales tri- or quinquecarinate; snout with large shields; rostral moderate..... 17. *Bolieria*, p. 121.



## 2. Scales smooth or unicarinate.

Head covered with small scales ; rostral large.

18. **Eryx**, p. 122.

Head covered with small scales ; rostral moderate, deeper than broad . . . . . 19. **Lichanura**, p. 129.

Head covered with large shields ; rostral large.

20. **Charina**, p. 130.

Subfam. 1. *PYTHONINÆ*.

Pythonina, *Gray, Zool. Miscell.* p. 43, 1842.

Holodontes (Pythonides), *Duméril & Bibron, Erp. Gén.* vi. p. 381, 1844.

Pythonina, *Gray, Cat. Sn.* p. 82, 1849.

Pythones, Loxocemi, *Cope, Proc. Ac. Philad.* 1861, p. 304.

Erycides, part., Pythonides, *Jan, Icon. Gén. Ophid.* p. 64, 1864.

Loxocemina, Pythonina, Chondropythonina, *Boulenger, Bull. Soc. Zool. France*, 1879, p. 147.

Pythoninæ, Chondropythoninæ, *Boulenger, Faun. Ind., Rept.* p. 244, 1890.

Supraorbital bone present.

1. **LOXOCEMUS**.

Loxocemus, *Cope, Proc. Ac. Philad.* 1861, pp. 76 & 304 ; *Bocourt, Miss. Sc. Mex., Rept.* p. 514 (1882).

Plastoseryx, *Jan, Arch. f. Nat.* 1862, p. 242, and *Icon. Gén.* p. 65 (1864).

Præmaxillary bone toothed. Anterior maxillary and mandibular teeth longest, gradually decreasing in size. Head not distinct from neck, covered with symmetrical shields ; rostral large and projecting ; no loreal shield, præfrontals in contact with labials ; nostrils lateral, in a small nasal, which is separated from its fellow by a pair of internasals ; frontal in contact with an azygous occipital shield. Eye small, with vertical pupil. Body cylindrical ; scales moderate, smooth. Tail short, conical, not prehensile ; subcaudals in two rows.

Mexico.

1. **Loxocemus bicolor**.

Loxocemus bicolor, *Cope, Proc. Ac. Philad.* 1861, p. 76 ; *Günth. Ann. & Mag. N. H.* (3) ix. 1862, p. 55, and *Zool. Rec.* 1864, p. 123 ; *Bocourt, Miss. Sc. Mex., Rept.* p. 515, pl. xxx. fig. 5 (1882).

Plastoseryx bronni, *Jan, Arch. f. Nat.* 1862, p. 244, and *Icon. Gén.* p. 66, l. 3, pl. i. (1864).

Loxocemus sumichrasti, *Bocourt, Journ. de Zool.* v. 1876, p. 344.

— bronni, *Bocourt, Miss. Sc. Mex., Rept.* p. 516, pl. xxx. fig. 6.

Snout very prominent. Rostral broader than deep, the portion

visible from above measuring one half to two thirds its distance from the frontal; internasals shorter than the præfrontals; frontal a little longer than broad, separating the parietals, and in contact with the occipital; supraocular small; one præ- and two or three postoculars; ten or eleven upper labials, fourth and fifth, or fifth and sixth entering the eye (or separated from it by a subocular). Scales in 31 to 33 rows. Ventrals 250-265; anal divided; subcaudals 39-47. Reddish or purplish brown above, uniform or with irregularly scattered small yellowish spots, uniform yellowish white beneath.

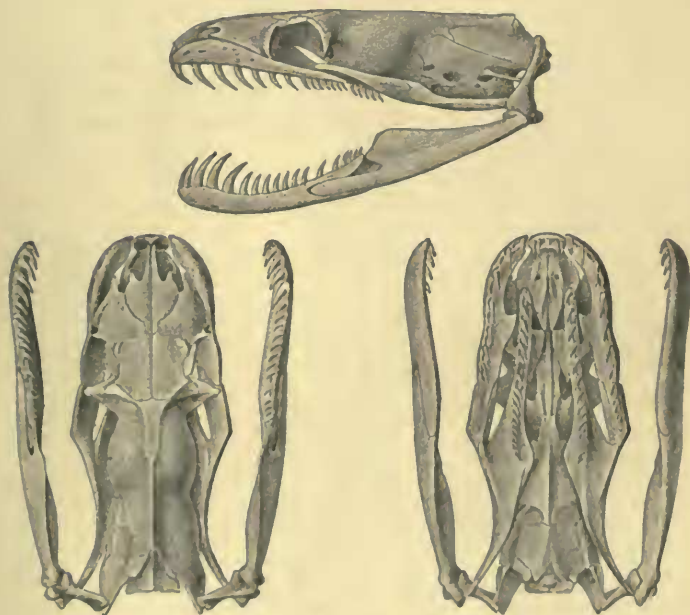
Total length 880 millim.; tail 90.

Southern Mexico.

- a-b. ♀ (V. 263, 252; Tehuantepec. F. Sumichrast [C.].  
C. 44, 39).  
c. Hgr. (V. 256; C. 47). — ? G. Lennox Conyngham, Esq.  
[P.].

## 2. NARDOA.

Fig. 4.

Skull of *Nardoia boa*.

- Tortrix, part., *Schleg. Phys. Serp.* ii. p. 1 (1837).  
Nardoia, part., *Gray, Zool. Miscell.* p. 45 (1842), and *Cat. Sn.* p. 93 (1849).  
*Nardoia*, *Dum. & Bibr. Erp. Gén.* vi. p. 444 (1844); *Jau, Icon. Gén.* p. 99 (1864).

Præmaxillary bone toothed. Anterior maxillary teeth longest, gradually decreasing in size; anterior mandibular teeth very large. Head slightly distinct from neck, covered with symmetrical shields; nostrils lateral, between two small nasals, which are separated from their fellows by a pair of internasals; some of the lower labials pitted. Eye small, with vertical pupil. Body slightly compressed; scales moderate, smooth. Tail rather short, conical, not or but slightly prehensile; subcaudals mostly in two rows.

New Ireland.

### 1. *Nardoa* *boa*.

*Tortrix* *boa*, *Schleg. Phys. Serp.* ii. p. 22 (1837), and *Abbild.* pl. xiii. (1839).

*Nardoa* *schlegelii*, *Gray, Zool. Miscell.* p. 45 (1842); *Dum. & Bibr.* vi. p. 447 (1844); *Gray, Cat.* p. 93 (1849); *Jan, Icon. Gén.* p. 99, l. 7, pl. vi. fig. 2 (1864).

— *boa*, *F. Müller, Verh. nat. Ges. Basel*, vii. 1882, p. 168.

Rostral nearly twice as broad as deep, not visible from above; internasals broader than long, two fifths to one third the length of the præfrontals; latter, one pair; frontal as long as broad or a little longer than broad; two pairs of parietals; a small loreal; a very large præocular; two postoculars; ten to twelve upper labials, two or three of which enter the eye; three or four of the posterior lower labials pitted. Scales in 35 to 38 rows. Ventrals 245–267; anal entire; subcaudals 47–52. Young with alternate black and orange rings; adult brown with black rings, or nearly uniform blackish brown; head black, with a light spot behind the eye.

Total length 950 millim.; tail 120.

New Ireland.

- |   |                  |                     |
|---|------------------|---------------------|
| <i>a, b, c, d-f.</i> Ad. (V. 251, 252, 267; C. 52, ♀, ♀) & yg. (V. 248, 246, 245; C. 50, 48, 51). | Duke of York Is. | Rev. G. Brown [C.]. |
| <i>g.</i> Ad., skel.  | Duke of York Is. | Rev. G. Brown [C.]. |

### 3. *LIASIS*.

*Liasis*, *Gray, Zool. Miscell.* p. 44 (1842).

*Nardoa*, part., *Gray, l. c.* p. 45, and *Cat. Sn.* p. 93 (1849).

*Liasis*, part., *Dum. & Bibr. Erp. Gén.* vi. p. 431 (1844); *Gray, Cat.* p. 91; *Jan, Icon. Gén. Ophid.* p. 98 (1864).

*Lisalia*, *Gray, Cat.* p. 92.

*Leiopython*, *Hübner, Notes Leyd. Mus.* i. 1879, p. 14.

Præmaxillary bone toothed. Anterior maxillary and mandibular teeth very long, gradually decreasing in size. Head distinct from neck, covered with symmetrical shields; nostrils supero-lateral, in a large semidivided nasal, which is separated from its fellow by a pair of internasals; rostral and upper labials without or with shallow pits; some of the lower labials pitted. Eye moderate or rather small, with vertical pupil. Body cylindrical or slightly

compressed; scales small, smooth. Tail moderate or short, not or but very slightly prehensile; subcaudals all or greater part in two rows.

Flores, Timor, Papuasias, North Australia.

*Synopsis of the Species.*

I. Several small loreal shields; rostral not pitted; scales in 41 to 45 rows; ventrals 257-287; subcaudals 38-53.

1. *childreni*, p. 77.

II. A single large loreal shield.

A. Rostral not pitted; two pairs of præfrontals.

Scales in 47 to 49 rows; ventrals 275-291;

subcaudals 65-72..... 2. *fuscus*, p. 78.

Scales in 69 to 75 rows; ventrals 349-361;

subcaudals 100-102..... 3. *olivaceus*, p. 79.

B. A pit or groove on each side of the rostral.

1. Two pairs of præfrontals; scales in 53 to 55 rows; ventrals 292-302; subcaudals 88-94 .... 4. *mackloti*, p. 79.

2. A single pair of præfrontals.

Scales in 49 to 55 rows; ventrals 262-284;

subcaudals 62-79..... 5. *albertisii*, p. 80.

Scales in 65 to 69 rows; ventrals 358-363;

subcaudals 85-88 ..... 6. *papuanus*, p. 80.

1. *Liasis childreni*. (PLATE IV. fig. 1.)

*Liasis childreni*, Gray, *Zool. Miscell.* p. 44 (1842); *Dum. & Bibr.* vi. p. 438 (1844); *Gray, Cat.* p. 92 (1849).

*Nardoa gilbertii*, Gray, *Zool. Miscell.* p. 45, and *Cat.* p. 93.

*Liasis maculosus*, Peters, *Mon. Berl. Ac.* 1873, p. 608; *Peters & Doria, Ann. Mus. Genova*, xiii. 1878, p. 403; *F. Müller, Verh. nat. Ges. Basel*, vii. 1885, p. 677.

Rostral broader than deep, just visible from above; internasals a little longer than broad, two thirds to three fifths the length of the anterior præfrontals; second pair of præfrontals in contact on the middle line or separated by a small shield; these posterior præfrontals sometimes broken up into several shields; frontal about once and a half as long as broad, a little shorter than its distance from the end of the snout; a pair of short parietals; three to ten loreal shields, some of which may be almost granular; two præ- and two to four postoculars; eleven to thirteen upper labials, without pits or with a very feeble one on the first shield; fifth and sixth, sixth and seventh, or fifth, sixth, and seventh upper labials entering the eye; three or four of the posterior lower labials deeply pitted. Scales in 41 to 45 rows. Ventrals 257-287; anal entire; subcaudals 38-53. Brown above, with more or less



distinct larger darker spots disposed in five or six longitudinal series; a dark streak on each side of the head, passing through the eye; lips yellowish, spotted with brown; lower parts uniform yellowish.

Total length 1200 millim.; tail 100.

North Australia.

- |  |                            |   |
|--|----------------------------|---|
| a. Yg. (Sc. 41; V. 287; C. 48).                          | N.W. Australia.            | (Type.)   |
| b. Hgr. (Sc. 43; V. 280; C. 53).                         | Port Essington.            | Mr. Dring [C.].   |
| c. Yg. (Sc. 43; V. 257; C. 49).                          | Port Essington.            | Mr. Gilbert [C.].   |
| d. Yg. (Sc. 43; V. 267; C. 46).                          | Port Darwin.               | (Type of <i>Nardoa gilbertii</i> ).<br>R. G. S. Buckland,<br>Esq. [C.]. |
| e. Yg. (Sc. 43; V. 270; C. 45).                          | Gulf of Carpentaria.       | G. Krefft, Esq. [P.].   |
| f-h. ♀ (Sc. 43, 43, 45; V. 277, 270, 270; C. ♀, 40, 38). | Islands of Torres Straits. | Rev. S. Macfarlane [C.].  |
| i. Hgr. (Sc. 45; V. 279; C. 45).                         | Australia.                 | Sir J. Richardson [P.].   |
| k. ♀ skel.   | Australia.                 | Mrs. Montague Levey [P.].   |

The specimens noticed by Krefft (Austral. Sn. p. 35) as *Nardoa gilbertii* would belong to a distinct species if the statement that they have 330 ventrals and 64 subcaudals is correct.

## 2. *Liasis fuscus*.

*Liasis olivaceus*, part., *Gray, Cat.* p. 92 (1849).

— *fuscus*, *Peters, Mon. Berl. Ac.* 1873, p. 607.

— *cornwallisius*, *Günth. Ann. & Mag. N. H.* (5) iii. 1879, p. 85, fig.

*Nardoa crassa*, *Macleay, Proc. Linn. Soc. N. S. W.* x. 1885, p. 66.

Rostral broader than deep, just visible from above; internasals longer than broad, not more than half as long as the prefrontals; the latter shields extend to the frontal (unless separated from it by a small azygous shield) and separate a second pair of much smaller prefrontals; frontal about once and a half as long as broad, a little shorter than its distance from the end of the snout; one or two pairs of parietals; a single large loreal; one præ- and two post-oculars; ten to twelve upper labials, first with a shallow pit, fifth and sixth (or sixth and seventh) entering the eye; three or four of the posterior lower labials pitted. Scales in 47 or 49 rows. Ventrals 275-291; anal entire; subcaudals 65-72. Uniform brown above, yellowish beneath.

Total length 1330 millim.; tail 190.

North Australia and New Guinea.

- |                                  |                      |                            |
|----------------------------------|----------------------|----------------------------|
| a. Hgr. (Sc. 47; V. 291; C. 68). | Sir Charles Hardy Is | J. B. Jukes, Esq.<br>[P.]. |
|----------------------------------|----------------------|----------------------------|



- b. ♀ (Sc. 47 ; V. 278 ; Cornwallis Island, Rev. S. Macfarlane  
C. ?). Torres Straits. [C.]  
(Type of *L. cornwallisius*.)
- c. Hgr. (Sc. 47 ; V. 275 ; Fly River, New Rev. S. Macfarlane  
C. 67). Guinea. [C.]
- d. ♀ (Sc. 47 ; V. 278 ; S.E. New Guinea. Rev. S. Macfarlane  
C. 72). [C.]

### 3. *Liasis olivaceus*. (PLATE IV. fig. 2.)

*Liasis olivaceus*, Gray, *Zool. Misc.* p. 45 (1842); *Dum. & Bibr.* vi. p. 442 (1844).

— *olivaceus*, part., Gray, *Cat.* p. 92 (1849).

Rostral broader than deep, just visible from above; internasals nearly twice as long as broad, more than half as long as the anterior præfrontals; posterior præfrontals in contact with each other or separated by a small azygous shield; frontal about once and a half as long as broad, shorter than its distance from the end of the snout; a pair of small parietals; a single large loreal; one præ- and three or four postoculars; thirteen to fifteen upper labials, first, or first and second pitted, sixth and seventh or seventh and eighth entering the eye; four or five of the posterior lower labials pitted. Scales in 69 to 75 rows. Ventrals 349-361; anal entire; subcaudals 100-102. Uniform olive-brown above, yellowish beneath.

Total length 1890 millim.; tail 360.

North Australia.

- a. Hgr. (Sc. 71 ; V. 350 ; Port Essington. Mr. Gilbert [C.]  
C. 102). (Type.)
- b. Hgr., stffd. Port Essington. Mr. Gilbert [C.]
- c. ♂ (Sc. 69 ; V. 369 ; N. Australia. Dr. J. R. Elsey [P.]  
C. ?).
- d. ♀ (Sc. 75 ; V. 349 ; N. Australia. Capt. Stokes [P.]  
C. 100).

### 4. *Liasis mackloti*.

*Liasis mackloti*, *Dum. & Bibr.* vi. p. 440 (1844); Gray, *Cat.* p. 92 (1849); *Jav, Icon. Gén.* p. 98, l. 7, pl. vi. fig. 1 (1864).

Rostral broader than deep, scarcely visible from above, with a feeble pit or groove on each side; internasals a little longer than broad, hardly half as long as the præfrontals; two pairs of præfrontals, the posterior small and separated from each other by the anterior; frontal nearly once and a half as long as broad, as long as its distance from the end of the snout; a pair of parietals, with smaller shields behind them; a large loreal; one præ- and two postoculars; eleven upper labials, first and second pitted, fifth and sixth entering the eye; five of the posterior lower labials pitted. Scales in 53 to 55 rows. Ventrals 292-302; anal entire; subcaudals 85-94. Sooty brown above, with scattered small yellowish spots; belly yellowish or brownish.

Total length 1680 millim.; tail 260.

Timor and Samao.

5. *Liasis albertisii*.

*Liasis albertisii*, *Peters & Doria, Ann. Mus. Genova*, xiii. 1878, p. 401, pl. iii. fig. 2.

*Leipython gracilis*, *Hübner, Notes Leyd. Mus.* i. 1879, p. 15.

Rostral broader than deep, just visible from above, with a pit or groove on each side; internasals a little longer than broad, not half as long as the præfrontals; a single pair of large elongate præfrontals; frontal a little longer than broad, shorter than its distance from the end of the snout; a pair of parietals, followed by several smaller shields; a large loreal; a large præocular; three or four postoculars; twelve or thirteen upper labials, first two or three pitted, fifth and sixth, or fifth, sixth, and seventh entering the eye; six of the posterior lower labials pitted. Scales in 49 to 55 rows. Ventrals 262-284; anal entire; subcaudals 62-79. Purplish brown above, head blackish; labials yellowish, with blackish vertical bars; uniform yellowish beneath.

Total length 1450 millim.; tail 200. Reaches to  $2\frac{1}{2}$  metres.

Western New Guinea and Serwatty Islands.

a-b. ♂ (Sc. 55; V. 274; C. 69) New Guinea.

& yg. (Sc. 51; V. 261; C. 62).

6. *Liasis papuanus*.

*Liasis papuanus*, *Peters & Doria, Ann. Mus. Genova*, xiii. 1878, p. 400, pl. iii. fig. 1.

Rostral broader than deep, visible from above, with a shallow pit or groove on each side; internasals about once and a half as long as broad, two thirds to three fourths the length of the præfrontals; a single pair of large præfrontals; frontal once and a half as long as broad, as long as its distance from the rostral; a pair of large parietals, which equal the frontal in length; a large loreal; a large præocular; two or three postoculars; ten or eleven upper labials, first two or three pitted, fifth and sixth or sixth and seventh entering the eye; four of the posterior lower labials pitted. Scales in 65 to 69 rows. Ventrals 358-363; anal entire; subcaudals 85-88. Olive-brown above, each scale blackish at the base; yellowish beneath.

Total length 2300 millim.; tail 320. Reaches to  $3\frac{1}{2}$  metres.

New Guinea.

a. ♀ (Sc. 69; V. 358; C. 85). New Guinea.

## 4. PYTHON.

Python, *Daud. Hist. Rept.* v. p. 226 (1803); *Wagl. Syst. Amph.* p. 168 (1830); *Schleg. Phys. Serp.* ii. p. 402 (1837); *Dum. & Bibr. Exp. Gén.* vi. p. 392 (1844); *Gray, Cat. Sn.* p. 87 (1849); *Günth. Rept. Brit. Ind.* p. 329 (1864); *Jan, Icon. Gén. Ophid.* p. 95 (1864); *Bouleng. Faun. Ind., Rept.* p. 245 (1890).

Constrictor, *Wagl. l. c.*

*Heleionomus*, *Gray, Zool. Miscell.* p. 42 (1842).

- Morelia, *Gray, Zool. Miscell.* p. 43; *Dum. & Bibr. t. c.* p. 383; *Gray, Cat.* p. 85; *Jan, l. c.* p. 94.  
 Hortulia, *Gray, Zool. Miscell.* p. 43, and *Cat.* p. 89.  
 Liasis, part., *Dum. & Bibr. t. c.* p. 431; *Gray, Cat.* p. 91; *Jan, l. c.* p. 98.  
 Simalia, *Gray, Cat.* p. 91.  
 Aspidopython, *A. B. Meyer, Mon. Berl. Ac.* 1874, p. 135.  
 Aspidobon, *Sauvage, Bull. Soc. Philom.* (7) viii. 1884, p. 143.  
 Hypaspistes, *Douglas Ogilby, Rec. Austral. Mus.* i. 1891, p. 193.

Premaxillary bone toothed. Anterior maxillary and mandibular teeth very long, gradually decreasing in size. Head distinct from neck; end of snout covered with shields, upper surface of head with symmetrical shields or small scales; nostril directed upwards or supero-lateral, in a large semidivided nasal, which is separated from its fellow by a pair of internasals; rostral and anterior upper labials with deep pits; some of the lower labials also pitted. Eye moderate, with vertical pupil. Body more or less compressed; scales small, smooth. Tail moderate or short, prehensile; subcaudals all or greater part in two rows.

Tropical and South Africa; South-eastern Asia; Papuasia; Australia.

### *Synopsis of the Species.*

#### I. Subcaudals more than 50 pairs.

##### A. 39 to 60 scales across the thickest part of the body.

1. Crown covered with scales or small irregular shields; 2 or 3 upper labials pitted . . . . . 1. *spilotes*, p. 82.
2. Crown with large symmetrical shields; 4 upper labials pitted.
- 39 to 53 scales; six or seven lower labials pitted . . . . . 2. *amethystinus*, p. 83.
- 60 scales; five lower labials pitted . . . . . 3. *timorensis*, p. 85.

##### B. 61 to 93 scales across the body.

- 69 to 79 scales; 297-330 ventrals; 78-102 caudals; four upper labials pitted; rostral as deep as broad . . . . . 4. *reticulatus*, p. 85.
- 81 to 93 scales; 269-286 ventrals; 63-77 caudals; two upper labials pitted; rostral as deep as broad . . . . . 5. *sebae*, p. 86.
- 61 to 75 scales; 242-265 ventrals; 60-72 caudals; two upper labials pitted; rostral broader than deep . . . . . 6. *molurus*, p. 87.

#### II. Subcaudals less than 50 pairs; scales 53 to 63.

- 253-267 ventrals; 46-47 caudals; five upper labials pitted . . . . . 7. *anchietae*, p. 88.

- 196-207 ventrals; 30-37 caudals; four  
upper labials pitted. . . . . 8. *regius*, p. 88.  
160-175 ventrals; 28-32 caudals; two  
upper labials pitted . . . . . 9. *curtus*, p. 89.

### 1. *Python spilotes*.

- White, Journ. Voy. N. S. W.* p. 259, pl.—. fig. 1 (1740).  
*Coluber spilotos, Lacép. Ann. Mus.* iv. 1804, pp. 194, 209.  
*Python punctatus, Merr. Tent.* p. 90 (1820); *Boie, Isis*, 1827, p. 516.  
*Echidna spilotes, Merr. l. c.* p. 150.  
*Python peronii, Wagl. Icones*, pl. i. (1828); *Schleg. Phys. Serp.* ii.  
p. 421, pl. xv. figs. 11 & 12 (1837).  
*Morelia punctata, Gray, Zool. Miscell.* p. 43 (1842).  
— *variegata, Gray, l. c., and Cat.* p. 86 (1849); *Krefft, Su.*  
*Austral.* p. 31, pl. ii. (1869); *McCoy, Prodr. Zool. Vict.*, Dec. ii.  
pl. xiii. (1878); *Douglas Ogilby, Rec. Austral. Mus.* i. 1890,  
p. 96.  
— *argus\**, *Dum. & Bibr.* vi. p. 385 (1844); *Jan, Icon. Gén.* p. 94,  
l. 7, pl. v. (1864); *Peters & Doria, Ann. Mus. Genova*, xiii. 1878,  
p. 404.  
— *spilotes, Gray, Cat.* p. 85; *Krefft, l. c.* p. 29, pl. i.

Rostral as broad as deep, or a little deeper than broad, visible from above; internasals as broad as long, followed by a pair of somewhat larger shields which may be broken up; the rest of the upper surface of the head covered with scales or small irregular shields, among which, however, an enlarged frontal shield and two or three supraoculars are sometimes conspicuous; eleven to thirteen upper labials, first two or three deeply pitted, sixth and seventh or seventh and eighth entering the eye; six or seven of the lower labials deeply pitted. Scales in 45 to 51 rows. Ventrals 251-304; anal entire or divided; subcaudals 63-92. Coloration very variable.

Total length 2000 millim. ( $6\frac{1}{2}$  feet); tail 250.

Australia and New Guinea.

A. Black above, each scale with a yellowish dot, with or without scattered yellow, black-edged spots; upper labials black-edged; lower parts yellow, the posterior ventrals and the subcaudals spotted or edged with black. (*Coluber spilotos*, Lacép.; *Python punctatus*, Merr.; *P. peronii*, Wagl.)

- a. ♀ (Sc. 49; V. 274; New South Wales. Australian Museum.  
C. 72).  
b. Hgr. ♂ (Sc. 49; V. 269; New South Wales. G. Krefft, Esq. [P].  
C. 84).  
c. Yg. (Sc. 49; V. 261; Australia. Haslar Hospital.  
C. 85).  
d, e. Ad., stffd. Australia.  
f. Ad., skel. Australia.  
g. Hgr., skel. Australia.

\* *Coluber argus*, Linn., is founded upon a figure of Seba's (Thea. ii. pl. ciii. fig. 1) which is probably not executed from a specimen, and certainly does not represent the *Python* here described. I regard *C. argus* as a mythical species.



B. Pale olive-brown above, each scale edged with black, with yellowish, black-edged spots and cross bars; or with three yellowish stripes, the middle one partly broken up into spots; upper labials black-edged; lower parts pale yellow, the posterior ventrals and the subcaudals spotted or edged with black. (*Morelia variegata*, Krefft.)

- h. ♀ (Sc. 51; V. 276; C. 76). New South Wales. Australian Museum.  
 i. Hgr. (Sc. 47; V. 280; C. 90). New South Wales. G. Krefft, Esq. [P].  
 k. Hgr., stfid. Australia. Sir G. Grey [P].  
 l. Ad., skel. Australia.

C. Pale brown with dark brown black-edged spots or cross bands, or dark brown with lighter markings; head with symmetrical dark brown markings; upper lip uniform yellowish, or only the anterior labials black-edged; a light dark-edged streak may be present along each side of the anterior part of the body; lower parts yellowish, more or less spotted with black. (*Morelia variegata*, Gray.)

- m. ♀ (Sc. 51; V. 280; C. 82). Moreton Bay. J. Macgillivray, Esq. [P].  
 n. Yg. (Sc. 49; V. 294; C. 80). Port Essington. Mr. Gilbert [C.].  
 o. ♀ (Sc. 47; V. 259; C. 81). Port Essington. J. B. Jukes, Esq. [P.].  
 p, q. Hgr. (Sc. 49; V. 290; C. 82) & yg. (Sc. 49; V. 281; C. 89). Port Essington. Lord Derby [P.].  
 r. Hgr. (Sc. 45; V. 261; C. 75). Port Essington.  
 s. ♀ (Sc. 49; V. 282; C. 87). Port Darwin. R. G. S. Buckland, Esq. [C.].  
 t. Yg. (Sc. 49; V. 289; C. 87). N.W. Australia. Capt. Stokes [C.].  
 u, v. Yg. (Sc. 49, 47; V. 260, 261; C. 75, 73). Houtman's Abrolhos. Mr. Gilbert [C.].  
 w, x, y. Yg. (Sc. 45, 49, 49; V. 262, 258, 251; C. 63, 65, 78). Swan River.  
 z. Hgr., stfid. Boston Id., S. Australia. Sir G. Grey [P.].

## 2. Python amethystinus.

- Boa amethystina*, *Schneid. Hist. Amph.* ii. p. 254 (1801), and *Denkschr. Akad. Münch.* vii. 1821, p. 117, pl. vii.  
*Python amethystinus*, *Daud. Rept.* v. p. 230 (1803); *Schleg. Phys. Serp.* ii. p. 419, pl. xv. figs. 8-10 (1837).  
*Liasis amethystinus*, *Gray, Zool. Miscell.* p. 44 (1842); *Dum. & Bibr.* vi. p. 433 (1844); *Gray, Cat.* p. 91 (1849); *Jan, Icon. Gén.* p. 98, l. 9, pl. vi. (1864); *Doria, Ann. Mus. Genova*, vi. 1874, p. 353;



*Peters, Mon. Berl. Ac.* 1876, p. 533, pl. —. fig. 2; *Macleay, Proc. Linn. Soc. N. S. W.* ii. 1877, p. 34; *Peters & Doria, Ann. Mus. Genova*, xiii. 1878, p. 399.

*Aspidopython jakati, A. B. Meyer, Mon. Berl. Ac.* 1874, p. 135.

*Liasis duceboracensis, Günth. Ann. & Mag. N. H.* (5) iii. 1879, p. 86, fig.

*Hypaspistes dipsadides, Douglas Ogilby, Rec. Austral. Mus.* i. 1891, p. 192.

Rostral as broad as deep, or slightly broader than deep, visible from above; internasals as long as broad or a little longer than broad, followed by a pair of large præfrontals, which are either in contact with the frontal or separated from it by one or two small shields; a pair of shorter præfrontals, separated from each other on the middle line; a large frontal, a large supraocular, and two or three pairs of large parietals; several small shields on the loreal region; two or three præ- and four or five postoculars; twelve to fourteen upper labials, four anterior deeply pitted, sixth and seventh or seventh and eighth entering the eye; six or seven of the posterior lower labials deeply pitted. Scales in 39 to 53 rows. Ventrals 289–328; anal entire; subcaudals 85–117. Yellowish or purplish brown above, uniform, or with darker or lighter markings; uniform yellowish beneath.

Total length 2270 millim.; tail 400. Reaches to  $3\frac{1}{2}$  metres (11 feet).

Moluccas, Timor, New Guinea, New Ireland and New Britain, Northern Queensland.

A. Uniform brown above, or with very indistinct darker or lighter markings.

- a. Hgr. (Sc. 49; V. 300; N. Ceram.  
C. 101).  
b. ♀ (Sc. 43; V. 311; C. 99). Timor Laut. H. O. Forbes, Esq. [C.].  
c. Hgr. (Sc. 45; V. 298; Cornwallis Id., Rev. S. Macfarlane [C.].  
C. 105). Torres Strait.  
d-e, f-g. ♂ (Sc. 39; V. 300; Duke of York Rev. G. Brown [C.].  
C. 103) & ♀ (Sc. 45, 43, Island. (Types of *L. duceboracensis*).  
39; V. 323, 323, 299;  
C. 100, 102, ?).  
h. Ad., skull. Torres Straits. Rev. S. Macfarlane [C.].

B. Pale brown, with darker X-shaped markings on the back and two stripes along each side.

- i, k-l, m-n. ♂ (Sc. 51, 51; Murray Id., Rev. S. Macfarlane [C.].  
V. 320, 328; C. 110, 109) Torres Straits.  
& ♀ (Sc. 53, 45, 47; V. 321,  
303, 304; C. 112, 118, 115).

C. Dark purplish brown above, with whitish spots or irregular cross bars.

- o. ♂ (Sc. 43; V. 289; C. 98). Timor Laut. H. O. Forbes, Esq. [C.].  
p. Yg. (Sc. 51; V. 301; C. 99). Misol.

3. *Python timorensis*.

*Lias amethystinus*, var. *timoriensis*, *Peters, Mon. Berl. Ac.* 1876, p. 533, pl. —. fig. 3.  
— *petersii*, *Hübner, Notes Leyd. Mus.* i. 1879, p. 16.

Rostral just visible from above; internasals considerably longer than broad, as long as the præfrontals behind them, which are separated from the frontal by a second pair of somewhat smaller præfrontals; a large supraocular and a large frontal, followed by two pairs of parietals; several small shields on the loreal region; a larger præocular, with a smaller one below it; three postoculars; twelve upper labials, four anterior deeply pitted, sixth entering the eye; five lower labials deeply pitted. Scales in 60 rows. Ventrals 288. Purplish brown above, with a network of patches of darker scales distributed among others of a lighter colour, resembling the pattern found in *P. reticulatus*; a dark line along the middle of the back of the head.

Timor and Flores.

4. *Python reticulatus*.

*Seba, Thes.* i. pl. lxxii. fig. 2 (1734), and ii. pls. lxxix. & lxxx. fig. 1 (1735).

*Boa reticulata*, *Schneid. Hist. Amph.* ii. p. 264 (1801); *Daud. Rept.* v. p. 116 (1803); *Schneid. Denkschr. Ak. Münch.* vii. 1821, p. 118.

— *rhombeata*, *Schneid. U. cc.* pp. 266, 118.

— *phrygia*, *Shaw, Zool.* iii. p. 348, pl. xcvii. (1802).

*Coluber javanicus*, *Shaw, t. c.* p. 441.

*Python schneideri*, *Merr. Tent.* p. 89 (1820); *Boie, Isis*, 1827, p. 515; *Guér. Icon. R. A., Rept.* pl. xxi. fig. 1; *Schleg. Phys. Serp.* ii. p. 415, pl. xv. figs. 5-7 (1837).

— *reticulatus*, *Gray, Zool. Misc.* p. 44 (1842); *Dum. & Bibr.* vi. p. 426 (1844); *Cantor, Cat. Mal. Rept.* p. 55 (1847); *Gray, Cat.* p. 87 (1849); *Günth. Rept. Brit. Ind.* p. 330 (1864); *Jan, Icon. Gén.* p. 97, l. 8, pl. vi. (1864); *Stoliczka, Journ. As. Soc. Beng.* xxxix. 1870, p. 205; *Theob. Cat. Rept. Brit. Ind.* p. 205 (1876); *Bouleng. Faun. Ind., Rept.* p. 246 (1890).

? *Python jamesonii*, *Gray, Zool. Misc.* p. 44.

Rostral as broad as deep, visible from above; internasals about once and a half as long as broad, followed by a pair of large præfrontals; a large supraocular (rarely divided) and a large, usually undivided frontal; two præ- and three or four postoculars; twelve to fourteen upper labials, four anterior deeply pitted, seventh or eighth entering the eye; two or three of the anterior and five or six of the posterior lower labials pitted. Scales in 69-79 rows. Ventrals 297-330; anal entire; subcaudals 78-102. Light yellowish or brown above, with large circular, rhomboidal, or X-shaped markings; young with three longitudinal series of light, black-edged spots; a black line along the middle of the head, from the end of the snout to the nape, and another on each side from behind

the eye to the angle of the mouth; lower parts yellowish, with small brown spots on the sides, or nearly entirely brown.

Total length 4780 millim.; tail 660. Reaches the length of 9 metres (30 feet).

Burma and Indo-China, Malay Peninsula and Archipelago.

<i>a-b, c.</i> Yg. (Sc. 71, 75, 75; V. 315, 320, 306; C. 96, 91, 84).	Pinang.	Dr. Cantor.
<i>d.</i> Hgr. (Sc. 75; V. 316; C. 94).	Singapore.	Dr. Dennys [P.].
<i>e.</i> Yg. (Sc. 73; V. 319; C. 97).	Borneo.	Sir J. Brooke [P.].
<i>f.</i> Yg. (Sc. 73; V. 308; C. 93).	Kejang River, Sarawak.	Brooke Low, Esq. [P.].
<i>g.</i> Hgr. (Sc. 75; V. 304; C. 92).	Batavia.	R. Kirkpatrick, Esq. [P.].
<i>h.</i> Yg. (Sc. 75; V. 319; C. 78).	Philippines.	H. J. Veitch, Esq. [P.].
<i>i-k.</i> ♀ (Sc. 75; V. 312; C. 81) & yg. (Sc. 77; V. 308; C. 94).	Ternate.	H.M.S. 'Challenger.'
<i>l.</i> Yg. (Sc. 79; V. 315; C. 83).	N. Ceram.	
<i>m.</i> Yg. (Sc. 77; V. 327; C. 84).	Timor Laut.	H. O. Forbes, Esq. [C.].
<i>n.</i> Ad., stffd.	—?	

### 5. *Python sebæ*.

*Seba, Thes.* ii. pls. xix. fig. 1, xxvii. fig. 1, & xcix. fig. 2 (1735).

*Coluber sebæ*, *Gmel. S. N.* i. p. 1118 (1788); *Daud. Rept.* vi. p. 238 (1803).

— *speciosus*, *Bonnat. Encycl. Méth., Ophiol.* p. 17 (1790).

*Boa hieroglyphica*, *Schneid. Hist. Amph.* p. 266 (1801), and *Denkschr. Ak. Münch.* vii. 1821, p. 119.

? *Python houttuynii*, *Daud. Rept.* v. p. 254 (1803).

*Python hieroglyphicus*, *Merr. Tent.* p. 90 (1820); *Boie, Isis*, 1827, p. 516.

— *bivittatus*, *Kuhl, Beitr. Zool. Vergl. Anat.* p. 94 (1820).

— *natalensis*, *Smith, S. Afr. Q. Journ.* (2) 1833, p. 64, and *Ill. Zool. S. Afr., Rept.* pl. ix. (1840); *Dum. & Bibr.* vi. p. 409 (1844); *Peters, Reise n. Mossamb.* iii. p. 105 (1882).

— *bivittatus*, part., *Schleg. Phys. Serp.* ii. p. 403 (1837).

— *sebæ*, *Dum. & Bibr. t. c.* p. 400, pl. lxi.; *Jan, Icon. Gén.* p. 96, l. 8, pls. iii. & iv. (1864).

*Heleionomus variegatus*, *Gray, Zool. Misc.* p. 43 (1842)\*.

*Hortulia natalensis*, *Gray, l. c.* p. 44, and *Cat.* p. 89 (1849).

— *sebæ*, *Gray, Cat.* p. 90.

Rostral as broad as deep, visible from above; internasals about once and a half as long as broad, followed by a pair of large præ-frontals; supraocular broken up into two or more shields; a pair of frontals, which may be broken up into small shields; a large præ-ocular, with one or two smaller ones below it; three or four post-

\* The type specimen appears to have been lost.

oculars; a series of suboculars separating the eye from the labials; thirteen to fifteen upper labials, two anterior deeply pitted; four or five of the posterior lower labials feebly pitted. Scales in 81 to 93 rows. Ventrals 269–286; anal entire or divided; subcaudals 63–77. Pale brown above, with dark brown, black-edged, more or less sinuous cross bars, which are usually connected by a continuous or interrupted sinuous dark stripe running along each side of the back; sides with large spots, and finely dotted with black; a large triangular dark brown blotch occupies the top of the head, bordered on each side by a light stripe beginning at the end of the snout, above the nostril, and passing above the eye; a dark stripe on each side of the head and a dark subtriangular blotch below the eye; upper surface of tail with a light stripe between two black ones; belly spotted and dotted with dark brown.

Total length 4100 millim.; tail 460. Said to grow to 7 metres (23 feet).

Tropical and South Africa.

a. Ad. (Sc. 91; V. 273; C. 64).	Gambia.	Lord Derby [P.].
b. Yg. (Sc. 93; V. 276; C. 76).	Gold Coast.	Mr. Rich [C.].
c. Yg. (Sc. 85; V. 270; C. 63).	Ashantee.	Leyden Mus.
d. Yg. (Sc. 85; V. 275; C. 67).	Fantee.	
e. Ad., head only.	South of Chartoum.	Consul Petherick [C.].
f. Ad., stiffd.	Port Natal.	Sir A. Smith [P.].
g. Hgr. (Sc. 89; V. 269; C. 72).	— ?	J. Melrose, Esq. [P.].
h. Hgr. (Sc. 91; V. 280; C. 66).	— ?	Zoolog. Society.
i. Ad., skel.	W. Africa.	Zoolog. Society.
k. Ad., skull.	S. Africa.	Sir A. Smith [P.].
l. Hgr., skull.	Senegal.	

## 6. Python molurus.

*Russell, Ind. Serp.* i. pls. xxii.–xxiv. & xxxix. (1796).

*Coluber molurus*, *Linn. S. N. i.* p. 387 (1766).

*Boa ordinata*, *Schneid. Hist. Amph.* ii. p. 260 (1801), and *Denkschr.*

*Ak. Münch.* vii. 1821, p. 122.

— *cinerea*, *Schneid. ll. cc.* pp. 270, 121.

— *castanea*, *Schneid. ll. cc.* pp. 272, 121.

— *albicans*, *Schneid. ll. cc.* pp. 274, 121.

— *orbiculata*, *Schneid. ll. cc.* pp. 276, 122.

*Python bora*, *Daud. Rept.* v. p. 236 (1803).

— *tigris*, *Daud. t. c.* p. 241, pl. lxiv.

— *ordinatus*, *Daud. t. c.* p. 252.

— *bivittatus*, part., *Schleg. Phys. Serp.* iii. p. 403, pl. xv. figs. 1–4 (1837).

— *molurus*, *Gray, Zool. Misc.* p. 44 (1842); *Dum. & Bibr.* vi. p. 417 (1844); *Gray, Cat.* p. 88 (1849); *Günth. Rept. Brit. Ind.* p. 331 (1864); *Jan, Icon. Gén.* p. 96, l. 8, pl. ii. (1864); *Stoliczka,*



*Journ. As. Soc. Beng.* xxxix. 1870, p. 205; *Theob. Cat. Rept. Brit. Ind.* p. 206 (1876); *Blanf. Journ. As. Soc. Beng.* xlviii. 1879, p. 127; *Bouleng. Faun. Ind., Rept.* p. 246 (1890); *W. Selater, Journ. As. Soc. Beng.* lx. 1891, p. 232.

Rostral broader than deep, visible from above; internasals not more than once and a half as long as broad, followed by a pair of large prefrontals; a large supraocular, separated from its fellow by a pair of frontals; two præ- and three or four postoculars; eleven to thirteen upper labials, two anterior deeply pitted, sixth or seventh entering the eye, if not separated by a series of suboculars; a few of the anterior and posterior lower labials feebly pitted. Scales in 61 to 75 rows. Ventrals 242-265; anal entire; subcaudals 60-72. Greyish brown or yellowish above, with a dorsal series of large elongate subquadrangular reddish-brown black-edged spots, and on each side a series of smaller spots with light centres; a lance-shaped marking on the head and nape; a lateral brown stripe passing through the eye, and a brown vertical bar below the eye; lower parts yellowish, sides brown-spotted.

Total length 2450 millim.; tail 300.

Grows to 30 feet (W. Elliot, Rep. Brit. Assoc. 1870, Trans. p. 115).

India and Ceylon, Southern China, Malay Peninsula, Java.

- |                                 |         |                          |
|---------------------------------|---------|--------------------------|
| a. ♂ (Sc. 73; V. 255; C. 63).   | Madras. | T. C. Jerdon, Esq. [P.]. |
| b. Ad., stffd.                  | India.  |                          |
| c. ♂ (Sc. 67; V. 245; C. 64).   | India.  | Zoolog. Society.         |
| d. Yg. (Sc. 69; V. 265; C. 68). | India.  |                          |
| e. Ad., skel.                   | Ceylon. |                          |

### 7. *Python anchietæ.*

*Python anchietæ, Bocage, Journ. Sc. Lisb.* xii. 1887, p. 87.

Upper surface of head covered with small subequal scales, except a pair of internasals and a pair of prefrontals, which are separated along the median line by two series of small scales; eye surrounded by a circle of small scales; fourteen upper labials, the five anterior pitted. Scales in 57 or 59 rows. Ventrals 253-267; subcaudals 46-47. A large triangular reddish-brown blotch covers the greater part of the upper surface of the head, and is bordered by a white black-edged band; it bears in the middle, behind the level of the eyes, a round white black-edged spot; back and sides pale reddish brown, with black-edged white spots and bands, the latter circumscribing large areas of the ground-colour, the centres of which are occupied by the spots; beneath yellowish, with a few irregular brown spots on the sides.

Total length (of young specimen) 1050 millim.; tail 100.

Benguela, S.W. Africa.

### 8. *Python regius.*

*Seba, Thes.* i. pl. lxii. fig. 1 (1734), and ii. pl. cii. (1735).

*Boa regia, Shaw, Zool.* iii. p. 347, pl. xcvi. (1802).

*Cenchrus regia, Gray, Griff. A. K.* ix. *Syn.* p. 97 (1831).



*Python bellii*, *Gray, Nat. Miscell.* p. 44 (1842).

— *regius*, *Dum. & Bibr.* vi. p. 412 (1844); *Jan, Icon. Gén.* p. 97, l. 8, pl. v. (1864); *F. Müll. Verh. nat. Ges. Basel*, vii. 1885, p. 676.

*Hortulia regia*, *Gray, Cat.* p. 90 (1849).

Rostral as broad as deep, visible from above; internasals nearly twice as long as broad, followed by a pair of large præfrontals; a large supraocular, separated from its fellow by a pair of frontals or by several small shields; two or three præ- and three or four postoculars, and a series of suboculars usually separating the eye from the labials; ten or eleven upper labials, four anterior deeply pitted, fifth or sixth sometimes entering the eyes; two to four of the posterior lower labials feebly pitted. Scales in 53 to 63 rows. Ventrals 196-207; anal entire or divided; subcaudals 30-37. Upper surface of head dark brown, with a pale, black-edged streak on each side, beginning above the nostril and passing through the eye; a dark brown, black-edged band occupies the back, sending down triangular or Y-shaped processes on the sides, which are pale brown; this dorsal band encloses a light streak on the neck, another on the tail, and a series of from ten to eighteen light round or oval spots; belly yellowish, with or without small brown spots on the sides.

Total length 1240 millim.; tail 100.

Senegambia and Sierra Leone.

<i>a, b.</i> Ad. (Sc. 55, 55; V. 205, 198; C. 31, 32).	Gambia.	Lord Derby [P.].
<i>c.</i> Yg. (Sc. 55; V. 200; C. 32).	Gambia.	Mr. Rendal [C.]. (Type of <i>P. bellii</i> ).
<i>d.</i> Yg. (Sc. 63; V. 207; C. 32).	Gambia.	Mr. Rendal [C.].
<i>e.</i> Ad. (Sc. 55; V. 197; C. 30).	Gambia.	Sir A. Moloney [P.].
<i>f-h.</i> Yg. (Sc. 59, 59, 55; V. 201, 196, 202; C. 37, 37, 32).	Freetown, Sierra Leone.	R. Dinzey, Esq. [C.].
<i>i.</i> Ad. (Sc. 53; V. 200; C. 34).	W. Africa.	Sir J. McGrigor [P.].
<i>k.</i> Hgr., stffid.	W. Africa.	

### 9. *Python curtus*.

*Python curtus*, *Schleg. Dierentuin, Rept.* p. 54, fig. (1872); *Hübner, Notes Leyd. Mus.* i. 1879, p. 244; *Blanf. Proc. Zool. Soc.* 1881, p. 222; *Bouleng. Proc. Zool. Soc.* 1889, p. 432, pl. xlv.

— *breitensteini*, *Steind. Sitzb. Ak. Wien*, lxxxii. 1881, p. 267; *Fischer, Arch. f. Nat.* 1885, p. 68, pl. v. fig. 5.

*Aspidoboa curta*, *Sawage, Bull. Soc. Philom.* (7) viii. 1884, p. 143.

Rostral broader than deep, visible from above; internasals as broad as long, separated from the frontal and the supraoculars by two pairs of large præfrontals; frontal longitudinally divided, followed by several pairs of transverse parietal shields; a large

supraocular; a large loreal; a large præocular, with several small scales below it; one or two postoculars; a series of suboculars may separate the eye from the labials; ten or eleven upper labials, the first two deeply pitted; anterior and posterior lower labials feebly pitted. Scales in 53 to 57 rows. Ventrals 160-175; anal entire; subcaudals 28-32. Brown or brick-red above, with a dorsal series of round pale spots, which may be confluent into a stripe on the posterior part of the back; a black line along the middle of the head, followed by elongate whitish black-edged spots; sides of body with greyish black-edged spots or undulous bands; sides of head dark, with an oblique light streak from behind the eye to the angle of the mouth; lower parts whitish, uniform or spotted with brown.

Total length 1370 millim.; tail 120.

Malay Peninsula, Sumatra, Borneo.

- |                                    |                         |  |
|------------------------------------|-------------------------|--|
| a. Ad., stfld.                     | Singapore.              |  |
| b. Ad. (Sc. 57; V. 172;<br>C. 28). | Malacca.                | Zoolog. Society.                               |
| c. Yg. (Sc. 53; V. 161;<br>C. 28). | Telang, S.E.<br>Borneo. | Hr. F. Grabowsky [C.].<br>(Dr. J. G. Fischer.) |

## 5. CHONDROPYTHON.

*Chondropython*, *A. B. Meyer, Mon. Berl. Ac.* 1874, p. 134; *Sauvage, Bull. Soc. Philom.* (7) ii. 1878, p. 36; *Bouleng. Bull. Soc. Zool. France*, 1879, p. 146.

No præmaxillary teeth. Anterior maxillary and mandibular teeth very large, posterior small. Head distinct from neck, covered with small scales; nostril in a large, single or divided nasal, separated from its fellow by a pair of internasal shields, which are themselves separated by a series of scales; rostral, anterior upper labials, and middle lower labials with deep pits. Eye moderate, with vertical pupil. Body more or less compressed; scales small, smooth. Tail moderate, prehensile; subcaudals in two rows.

New Guinea.

### 1. *Chondropython viridis*.

*Python viridis*, *Schleg. Dierentuin, Rept.* p. 54 (1872).

*Chondropython azureus*, *A. B. Meyer, Mon. Berl. Ac.* 1874, p. 134; *Peters & Doria, Ann. Mus. Genova*, xiii. 1878, p. 403; *Bouleng. Bull. Soc. Zool. France*, 1879, p. 146.

— pulcher, *Sauvage, Bull. Soc. Philom.* (7) ii. 1878, p. 37.

Rostral as deep as broad, or a little deeper than broad; head-scales granular, 17 to 20 across the forehead, from eye to eye; the scales round the eye not enlarged; 12 to 15 upper labials, first and second, or first, second, and third pitted, sixth, seventh, and eighth, or eighth and ninth entering the eye; seventh to twelfth, eighth to thirteenth, or ninth to fourteenth lower labials pitted. Scales in 57 to 61 rows. Ventrals 227-240; anal entire; subcaudals 75-109. Bright green above, uniform or with a series of

small yellowish spots along the back; or brick-red with bluish, black-edged spots; young pinkish or yellowish, with purplish or reddish-brown markings; lower parts yellowish white.

Total length 1450 millim.; tail 200.

New Guinea.

- a. ♀ (Sc. 57; V. 227; Mt. Arfak. Hr. Bruijn [C.].  
C. 92).  
b-c. Yg. (Sc. 61, 59; Mansinam. M. L. Laglaize [C.].  
V. 240, 233; C. 84, 109).  
d. ♀ (Sc. 57; V. 237; N.W. New Guinea. M. A. Linden [C.].  
C. 86).  
e. ♀ (Sc. 61; V. 237; New Guinea.  
C. 87).

## 6. ASPIDITES.

*Aspidiotes* (*non Bouché*), *Kreffl, Proc. Zool. Soc.* 1864, p. 20, and *Austral. Snakes*, p. 33 (1869).

*Aspidites*, *Peters, Mon. Berl. Ac.* 1876, p. 914.

No præmaxillary teeth. Anterior maxillary and mandibular teeth longest, gradually decreasing in size. Head slightly distinct from neck, with large symmetrical shields; nostril lateral, in a single nasal, which is separated from its fellow by a pair of internasals; rostral rather large. Eye small, with vertical pupil. Body cylindrical; scales small, smooth. Tail moderate, not or scarcely prehensile; subcaudals mostly in a single row.

North Australia.

### 1. *Aspidites melanocephalus*.

*Aspidiotes melanocephalus*, *Kreffl, Proc. Zool. Soc.* 1864, p. 20, fig.; *Günth. Ann. & Mag. N. II.* (3) xviii. 1866, p. 29; *Kreffl, Austral. Sn.* p. 33, pl. iii. (1869); *Peters, Mon. Berl. Ac.* 1876, p. 533.

Rostral broader than deep, the portion visible from above half as long as its distance from the frontal; internasals as broad as long, shorter than the anterior præfrontals; posterior præfrontals just touching each other in front of the frontal; latter slightly longer than broad; parietals subdivided into small shields; a large loreal; two or three præoculars; three or four postoculars; eleven or twelve upper labials, sixth entering the eye. Scales in 53 rows. Ventrals 330; anal entire; subcaudals 64, only a few of which are divided. Light brown above, with darker cross bars, yellowish beneath; head and neck jet-black above and below.

Total length 2050 millim.; tail 220.

North Australia.

- a. ♀ (Sc. 53; V. 330; Port Denison. G. Krefft, Esq. [P.].  
C. 64). (Type.)

2. *Aspidites ramsayi*.

*Aspidotes ramsayi*, *Macleay, Proc. Linn. Soc. N.S.W.* vi. 1882, p. 813.

Differs from the preceding in having the eye separated from the labials by a subocular; fourteen upper labials. Ventrals 293; anal divided; subcaudals 52, the four last divided. Greyish brown above, variegated with indistinct darker brown bands and spots over the entire upper surface from the head to the tail; ventrals yellowish, the basal portion of each shield dusky.

Total length 1900 millim.; tail 330.

Port Bourke.

## 7. CALABARIA.

*Calabaria*, *Gray, Proc. Zool. Soc.* 1858, p. 154; *Günth. Cat. Col. Sn.* p. 280 (1858).

*Rhoptrura*, *Peters, Mon. Berl. Ac.* 1858, p. 340.

Præmaxillary and palate toothless; anterior maxillary and mandibular teeth longest, gradually decreasing in size. Head not distinct from neck, covered with shields; rostral large; nostril in a single or semidivided nasal. No mental groove. Eye very small, with vertical pupil. Scales moderate, smooth. Tail short, thick, not prehensile, rounded at the end; subcaudals single.

West Africa.

1. *Calabaria reinhardti*.

*Eryx reinhardtii*, *Schleg. Bijdr. tot de Dierk.* i. p. 2, pl. — (1848); *Fisch. Verh. nat. Ver. Hamb.* (2) iii. 1879, p. 91, pl. iii. figs. 1-6.

*Calabaria fusca*, *Gray, Proc. Zool. Soc.* 1858, p. 155, pl. xiv.; *Günth. Cat. Col. Sn.* p. 280 (1858); *F. Müll. Verh. nat. Ges. Basel*, vii. 1885, p. 675.

*Rhoptrura reinhardti*, *Peters, Mon. Berl. Ac.* 1858, p. 340.

— *petiti*, *Sauvage, Bull. Soc. Zool. France*, 1884, p. 202, pl. vi. fig. 4.

Rostral as deep as broad, extending to the upper surface of the snout, separated from the frontal by three pairs of transverse shields; frontal broader than long, as long as or a little shorter than its distance from the rostral, followed by an equally long or shorter parietal; two supraoculars; a loreal; one or two præ- and one or two postoculars; eight upper labials, fourth or third and fourth entering the eye. Scales in 29 to 32 rows. Ventrals 221-239; anal entire; subcaudals 20-28. Reddish or purplish brown above, with more or less numerous irregularly scattered yellowish spots.

Total length 860 millim.; tail 65.

West Africa, from Liberia to the Congo.

a. Ad. (V. 223; C. 20).	Old Calabar.	(Type of <i>C. fusca</i> .)
b-c. Ad. (V. 227, 224; C. 25, 25).	Cameroons.	Rev. J. Pinnock [C.].
d. Ad. (V. 230; C. 24).	Cameroons.	
e. Hgr. (V. 224; C. 24).	Fernando Po.	Zoolog. Society.
f. Ad. (V. 233; C. 23).	Gabcon.	Dr. J. G. Fischer.
g. Ad. (V. 221; C. 21).	W. Africa.	



Subfam. 2. *BOINÆ*.

*Boiua, Eryxina, Gray, Zool. Miscell.* pp. 41, 45, 1842.

Aprotérodontes (*Erycides, Boæides*), *Duméril & Bibron, Exp. Gén.* vi. p. 450, 1844.

*Boina, Erycina, Charinina, Gray, Cat. Snakes*, pp. 83, 84, 1849.

*Boæ, Eryces, Cope, Proc. Ac. Philad.* 1861, p. 304.

*Erycides, part., Boæides, Jan, Icon. Gén. Ophid.* p. 64, 1864.

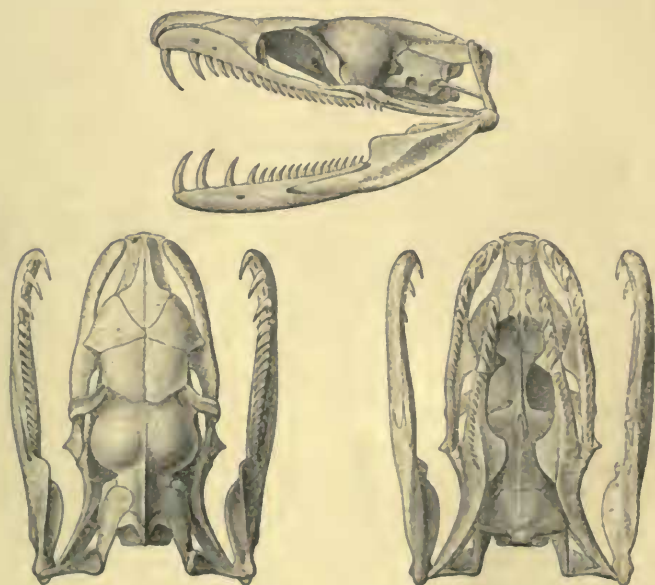
*Boinæ, Boulenger, Faun. Ind., Rept.* p. 244, 1890.

No supraorbital bone.

The præmaxillary is constantly toothless, the palatines and pterygoids toothed.

## S. EPICRATES.

Fig. 5.

Skull of *Epicrates cenchris*.

*Draco (non Laur.)*, part., *Oken, Lehrb. Naturg.* iii. p. 273 (1816).

*Epicrates, Wagler, Syst. Amph.* p. 168 (1830); *Dum. & Bibr. Exp. Gén.* vi. p. 552 (1844); *Gray, Cat. Sn.* p. 94 (1849); *Fischer, Abh. nat. Ver. Hamb.* iii. 1856, p. 95; *Jan, Icon. Gén.* p. 88 (1864); *Bocourt, Miss. Sc. Mex., Rept.* p. 525 (1882)

*Boa, part., Schleg. Phys. Serp.* ii. p. 373 (1837).

*Chilabothrus, Dum. & Bibr. t. c.* p. 562; *Gray, l. c.* p. 103; *Jan, l. c.* p. 86; *Bocourt, l. c.* pp. 517, 524.

*Cliftia, Gray, l. c.* p. 90.



*Epicarsius*, *Fischer*, *l. c.*

*Homalochilus*, *Fischer*, *l. c.* p. 100; *Jan*, *l. c.* p. 85.

*Piesigaster*, *Seoane*, *Abh. Senck. Ges.* xii. 1880, p. 217.

Anterior maxillary and mandibular teeth very long. Head distinct from neck, covered with shields, which may be small and irregular or large and symmetrical; a pair of internasals and a pair of anterior præfrontals constantly present; nostril between two or three nasals; loreal shield present; labial pits, if present, shallow. Eye moderate, with vertical pupil. Body more or less compressed; scales small, smooth. Tail moderate or long, prehensile; subcaudals single.

Tropical America.

*Synopsis of the Species.*

I. Scales in 45 to 51 rows; ventrals 223 to 268; several small shields between the supraoculars . . . . . 1. *cenchris*, p. 94.

II. Scales in 51 to 65 rows; ventrals 271 to 302.

A series of suboculars separates the labials

from the eye . . . . . 2. *angulifer*, p. 96.

One or two labials entering the eye . . . . . 3. *striatus*, p. 96.

III. Scales in 33 to 45 rows; a single large shield (rarely broken up) between the supraoculars.

Supraocular nearly as large as the frontal;

ventrals 261–286; subcaudals 60–80 . . . . 4. *inornatus*, p. 97.

Supraocular about half as large as the frontal;

ventrals 250–265; subcaudals 70–80 . . . . 5. *fordii*, p. 98.

Supraocular about half as large as the frontal;

ventrals 282–289; subcaudals 100–103 . . 6. *gracilis*, p. 98.

1. *Epicrates cenchris*.

*Seba*, *Thes.* i. pl. lvi. fig. 4 (1734), & ii. pls. liv. fig. 3, lxxxviii. fig. 1, & xeviii. (1735).

*Boa cenchria*, *Linn. Mus. Ad. Frid.* ii. p. 41 (1764), and *S. N.* i. p. 374 (1766); *Wied. Abbild.* (1822), and *Beitr. Nat. Bras.* i. p. 219 (1825); *Schleg. Phys. Serp.* ii. p. 385, pl. xiv. figs. 3–5 (1837).

— *cenchris*, *Gmel. S. N.* i. p. 1083 (1788); *Schneid. Hist. Amph.* ii. p. 250 (1801); *Shaw, Zool.* iii. p. 344, pl. xciv. (1802); *Schneid. Denkschr. Ak. Münch.* vii. 1821, p. 120.

— *aboma*, *Daud. Rept.* v. p. 132 (1803).

— *ternatea*, *Daud. t. c.* p. 153.

— *annulifer*, *Daud. t. c.* p. 202, pl. lxiii. fig. 3; *Merr. Ann. Wetter. Ges.* ii. 1810, p. 51, pl. ix.; *Schneid. l. c.* p. 127.

*Draco ocellatus*, *Oken, Lehrb. d. Naturg.* iii. p. 277 (1815).

*Epicrates cenchria*, *Gray, Griff. A. K.* ix., *Syn.* p. 96 (1831), and *Cat.* p. 96 (1849); *Garm. Proc. Am. Philos. Soc.* xxiv. 1887, p. 279.

— *cenchris*, *Dum. & Bibr.* vi. p. 555 (1844); *Jan, Icon. Gén.* p. 89, l. 8, pl. i. (1865).

— *maurus*, *Gray, Cat.* p. 96.

*Cliftia fusca*, Gray, l. c. p. 99.

*Epicarsius cupreus*, Fisch. *Abh. nat. Ver. Hamb.* iii. 1856, p. 96, pl. ii. fig. 1.

*Epicrates cupreus*, Jan, l. c. p. 90, l. 7, pl. i.; Bocourt, *Miss. Sc. Mex., Rept.* p. 525, pl. xxxi. fig. 3 (1832).

Rostral slightly broader than deep, visible from above; upper surface of snout and interorbital space with small, more or less regular shields; usually an azygous præfrontal, separated from the internasals by a pair of small shields; a supraocular, which may be broken up into two or three small shields; an elongate loreal, in contact with the second, or second and third labials, but separated from the other labials by two or three scales; two præoculars, upper largest; four or five postoculars; 11 to 13 upper labials, sixth and seventh or seventh and eighth entering the eye; upper and lower labials with more or less distinct shallow pits or impressions between them. Scales in 45 to 51 rows. Ventrals 223-268; anal entire; subcaudals 50-66. Pale brown above, uniform or elegantly marked with rings and spots.

Total length 1700 millim.; tail 220.

Tropical America, from Costa Rica to Northern Peru and Northern Brazil.

A. Five dark brown longitudinal lines on the head; back with a series of dark brown or black rings; sides with dark spots, or black and white ocelli, or one or two dark brown stripes. (*E. cenchrus*, L.)

a. Yg. (Sc. 47; V. 231; C. 55).	Chagres River.	
b-c. Yg. (Sc. 49, 51; V. 240, 237; C. 55, 55).	Rosario de Cutaca, Colombia.	Mr. C. Webber [C.].
d-f. Yg. (Sc. 49, 49, 49; V. 230, 232, 238; C. 56, 52, 60).	Trinidad.	
g. Yg. (Sc. 47; V. 228; C. 50).	Trinidad.	C. Taylor, Esq. [P.].
h. Yg. (Sc. 49; V. 234; C. 56).	Caracas.	
i. ♀ (Sc. 47; V. 266; C. 66).	British Guiana.	Sir R. Schomburgk [P.].
k-l. ♂ (Sc. 47; V. 225; C. 50) & yg. (Sc. 49; V. 256; C. 62).	British Guiana.	Demerara Museum [P.].
m-o. ♀ (Sc. 45, 47; V. 253, 266; C. 53, 59) & yg. (Sc. 47; V. 233; C. 52).	Berbice.	
p. Yg. (Sc. 49; V. 234; C. 50).	Cayenne.	H. C. Rothery, Esq. [P.].
q. ♀ (Sc. 51; V. 268; C. 63).	Para.	R. Graham, Esq. [P.].
r. ♀ (Sc. 41; V. 257; C. 53).	Moyobamba, N.E. Peru.	Mr. A. H. Roff [C.].
s. ♀ (Sc. 49; V. 260; C. 57).	Peruvian Amazons.	Mr. E. Bartlett [C.].
t. Ad., skel.	S. America.	
u. Hgr., skull.	S. America.	

B. Markings very indistinct or absent. (*Clistia fusca*, Gray ;  
*E. maurus*, Gray ; *E. cupreus*, Fisch.)

v. Hgr., stfid.	— ?	(Type of <i>Clistia fusca</i> .)
w. ♂ (Sc. 51 ; V. 238 ; C. 55).	Venezuela.	(Type of <i>E. maurus</i> .)
x. ♂ (Sc. 47 ; V. 233 ; C. 58).	Venezuela.	

### 2. *Epicrates angulifer*.

*Epicrates angulifer*, *Bibr. in R. de la Sagra, Hist. Cuba, Rept.* p. 215,  
pl. xxv. (1843) ; *Dum. & Bibr. vi.* p. 560 (1844) ; *Jan, Icon. Gén.*  
p. 89, l. 6, pl. vi. (1864) ; *Gundl. Erp. Cub.* p. 70 (1880).  
*Boa*, sp., *Gundl. Arch. f. Nat.* 1840, p. 361.

Head with more or less regular shields above, the largest being a pair of præfrontals, a pair of frontals (which may be broken up), and, on each side, a supraocular ; a large, elongate loreal, sometimes divided into two, separated from the labials by a series of small shields ; a large præocular, and a series of 6 small shields below and behind the eye, which is entirely separated from the labials ; 13 or 14 upper labials, with very feeble pits. Scales in 51 to 65 rows. Ventrals 276–290 ; anal entire ; subcaudals 50–79. Pale brown above, with a dorsal series of rhomboidal dark spots, and dark brown reticulated lines on the sides ; a lateral series of dark brown ocelli with yellowish centres ; yellowish beneath.

Total length 2170 millim. ; tail 195.

Cuba.

### 3. *Epicrates striatus*.

*Epicrates angulifer* (*non Bibr.*), Gray, *Cat.* p. 94 (1849). (Specimens only.)

*Homalochilus striatus*, Fischer, *Abh. naturw. Ver. Hamb.* iii. 1856,  
p. 102, pl. ii. fig. 2 ; *Jan, Icon. Gén.* p. 86, l. 6, pl. iv. (1864) ;  
*Steind. Novara, Rept.* p. 57 (1867).

— *multisectus*, Cope, *Proc. Ac. Philad.* 1862, p. 70.

— *strigilatus*, Cope, *l. c.* p. 71, and *Proc. Am. Philos. Soc.* xi.  
1871, p. 558.

*Epicrates versicolor*, Steind. *Denkschr. Ak. Wien*, xxii. 1863, p. 89,  
pl. —.

— *striatus*, Steind. *l. c.* p. 93.

Rostral slightly broader than deep, visible from above ; enlarged shields on the top of the head ; a pair of præfrontals, a pair of frontals sometimes fused, sometimes broken up, and, on each side, a supraocular, which may be divided into two or three shields ; a large elongate loreal, sometimes divided into two ; a large præocular, with a subocular below it ; one or two scales in front of the subocular ; four or five postoculars ; 14 or 15 upper labials, without or with very feeble impressions, seventh and eighth, eighth and ninth, or ninth, entering the eye ; posterior lower labials with shallow impressions. Scales in 51 to 63 rows. Ventrals 271–302 ; anal entire ; subcaudals 64–88. Pale brown above, with dark olive-brown spots separated by narrow interspaces, or brown with

yellowish undulous or zigzag cross bands, which may be edged with blackish; usually a more or less distinct dark streak on each side of the head behind the eye; lower parts yellowish or pale olive, more or less spotted with brown or black.

Total length 1500 millim.; tail 250.

Santo Domingo; New Providence Id., Bahamas.

- a, b.* ♀ (Sc. 63, 55; V. 302, 290; S. Domingo. Zoological Society.  
C. 82, 81).  
*c.* Yg. (Sc. 57; V. 281; C. 82). S. Domingo.  
*d, e.* ♀ (Sc. 61, 55; V. 288, 283; —? Zoological Society.  
C. ?, 88).  
*f.* ♂ (Sc. 51; V. 271; C. 79). —? Haslar Hospital.

The following specimens, born in the Zoological Gardens, London, have been stated to be hybrids between *Epicrates angulifer* and *Chilabothrus inornatus* (Selater, Proc. Zool. Soc. 1878, p. 789). But as they do not differ from *E. striatus*, and as I entertain doubts concerning the correct determination of the parents (which I have not been able to trace), I feel justified in referring them to this species.

- g-h, i, k, l.* Hgr. & yg. (Sc. 55, 55, Bred in London. Zoological Society.  
55, 53, 51; V. 278, 282, 285,  
285, 278; C. 66, 64, 66, ?, 66).

#### 4. *Epicrates inornatus*.

*Boa inornata*, Reinh. Dansk. Vid. Selsk. x. 1843, p. 253, pl. i. figs. 21-23.

*Chilabothrus inornatus*, Dum. & Bibr. vi. p. 563 (1844); Gray, Cat. p. 103 (1849); Jan, Icon. Gén. p. 87, l. 6, pl. v. (1864); Garm. N. Am. Rept. p. 132 (1883); Bocourt, Miss. Sc. Mex., Rept. p. 524, pl. xxxi. fig. 2 (1882).

*Piesigaster boettgeri*, Seoane, Abh. Senck. Ges. xii. 1880, p. 217, pl. —.

Rostral slightly broader than deep, visible from above; two pairs of præfrontals, posterior sometimes broken up into small irregular shields; a large frontal, in contact with, and not or but slightly larger than, the supraoculars; a pair of small parietals, in contact with the frontal and supraoculars; a large, elongate loreal; a large præocular, usually with a small shield below it; two to four postoculars; eleven or twelve upper labials, one, two, or three (fifth to seventh) entering the eye; no labial pits. Scales in 39 to 45 rows. Ventrals 261-286; anal entire; subcaudals 60-80. Yellow or pale olive anteriorly, frequently blackish brown posteriorly; more or less distinct spots or cross bars on the body; sometimes a pair of dark streaks along the neck; an ill-defined dark streak may be present behind the eye.

Total length 1500 millim.; tail 250.

Jamaica, Santo Domingo, Porto Rico.



- a. ♂ (Sc. 43; V. 275; C. 76). Jamaica. P. H. Gosse, Esq.  
[P.]  
b. Ad., stffid. Jamaica. J. Gould, Esq. [P.]  
c, d, e. ♂ (Sc. 41, 41; V. 267, W. Indies.  
277; C. 71, 79).  
f. ♂ (Sc. 45; V. 276; C. 80). —?  
g-i. Yg. (Sc. 41, 39, 39; V. 265, Born in the Zoological Gardens,  
264, 273; C. 74, ♀, 60). London.  
k. Eggs. Bluefields, Ja- P. H. Gosse, Esq.  
maica. [P.]

### 5. *Epicrates fordii*.

- Pelophilus fordii*, *Günth. Proc. Zool. Soc.* 1861, p. 142, pl. xxiii.  
*Chilabothrus fordii*, *Jan, Icon. Gén.* p. 87 (1865).  
*Homalochilus chrysogaster*, *Cope, Proc. Am. Philos. Sc.* xi. 1871,  
p. 557.  
*Chilabothrus maculatus*, *Fischer, Jahrb. Hamb. Wiss. Anst.* v. 1888,  
p. 33, pl. iii. fig. 7.

Rostral a little broader than deep, scarcely visible from above; a pair of large præfrontals, followed by smaller, more or less regular shields; a large frontal, in contact with the supraocular, which is only about half as large; two to four loreals; a large præocular, with one or two small shields below it; four to seven postoculars; 13 or 14 upper labials, sixth and seventh, seventh and eighth, or sixth, seventh, and eighth entering the eye; no labial pits. Scales in 33 to 43 rows. Ventrals 250-265; anal entire; subcaudals 70-80. Pale olive, yellowish, or reddish above, with a dorsal series of large, elliptic or reniform, transverse dark brown spots edged with blackish, some of which may be confluent to form an undulous band; a lateral series of smaller spots; a dark stripe on each side of the head, passing through the eye; belly yellowish, with small brown spots.

Total length 740 millim.; tail 125.

Santo Domingo; Turk's Island, Bahamas.

- a. ♀ (Sc. 37; V. 250; C. 80). S. Domingo.  
b. ♀ (Sc. 33; V. 253; C. 70). —? (Type.)  
c. ♀ (Sc. 33; V. 253; C. 74). —? Dr. A. Günther [P.]

### 6. *Epicrates gracilis*.

- Chilabothrus gracilis*, *Fischer, Jahrb. Hamb. Wiss. Anst.* v. 1888,  
p. 35, pl. iii. fig. 8.

Closely allied to the preceding, but more slender and strongly compressed. 11 or 12 upper labials, sixth and seventh or fifth and sixth entering the eye. Scales in 40 rows. Ventrals 282-289; subcaudals 100-103. Blackish grey, somewhat lighter on the belly; six longitudinal series of small black spots.

Total length 895 millim.; tail 165.

Santo Domingo.



## 9. CORALLUS.

Boa, part., *Daud. Hist. Rept.* v. p. 106 (1803); *Schleg. Phys. Serp.* ii. p. 373 (1837).

Corallus, *Daud. t. c.* p. 256; *Gray, Cat. Sn.* p. 97 (1849).

Draco (non Laur.), part., *Oken, Lehrb. Naturg.* iii. p. 273 (1816).

Xiphosoma, *Wagler, in Spiz, Serp. Bras.* p. 40 (1824), and *Syst.*

*Amph.* p. 167 (1830); *Dum. & Bibr. Erp. Gén.* vi. p. 356 (1844);

*Gray, l. c.* p. 96; *Jan, Icon. Gén.* p. 91 (1864); *Bocourt, Miss. Sc. Mex., Rept.* p. 526 (1882).

Sanzinia, *Gray, l. c.* p. 98.

Chrysenis, *Gray, Proc. Zool. Soc.* 1860, p. 132.

Anterior maxillary and mandibular teeth very large, posterior small. Head distinct from neck, covered with scales or small shields; nostril between three shields; both lips with deep pits. Eye moderate, with vertical pupil. Body compressed; scales small, smooth. Tail more or less elongate, or short, prehensile; subcaudals single.

Tropical America; Madagascar.

*Synopsis of the Species.*

I. Tail long, with at least 100 subcaudals; nasals usually in contact behind the rostral; no labials entering the eye.

Scales in 39 to 47 rows; ventrals

253-285..... 1. *cookii*, p. 99.

Scales in 51 to 59 rows; ventrals

270-299..... 2. *hortulanus*, p. 101.

II. Tail moderate, with 64 to 82 subcaudals; rostral in contact with a pair of small shields separating the nasals; no labials entering the eye.

Scales in 54 rows; ventrals 260.... 3. *annulatus*, p. 102.

Scales in 61 to 71 rows; ventrals 188-

219..... 4. *caninus*, p. 102.

III. Tail short, with 30 to 48 subcaudals; rostral in contact with a pair of small shields separating the nasals; eye in contact with labials; scales in 41 to 53 rows; ventrals 200-234..... 5. *madagascariensis*, p. 103.

1. *Corallus cookii*. (PLATE IV. fig. 3.)

Boa hortulana, part., *Schleg. Phys. Serp.* ii. p. 392 (1837).

*Corallus cookii*, *Gray, Zool. Misc.* p. 42 (1842).

— hortulanus, part., *Gray, Cat.* p. 97 (1849).

Xiphosoma ruschenbergii, *Cope, Journ. Ac. Philad.* viii. 1876, p. 129;

*Bocourt, Miss. Sc. Mex., Rept.* p. 527 (1882).

— hortulanum, *Garm. Proc. Am. Philos. Soc.* xxiv. 1887, p. 279.

Rostral as broad as deep, or slightly deeper, not or but scarcely

visible from above; nasals in contact behind the rostral, followed by a pair of large præfrontals; a series of enlarged supraoculars, separated from the eye by one series of scales; 9 to 18 scales from eye to eye across the forehead, and 11 to 14 round the eye; one or two large præoculars and two large loreals; 11 to 14 upper labials, strongly pitted below and behind the eye, the anterior more or less distinctly pitted; anterior lower labials not pitted. Scales in 30 to 47 rows. Ventrals 253-285; anal entire; subcaudals 101-118. Coloration very variable.

Total length 1550 millim.; tail 320.

Colombia, Venezuela, British Guiana, Trinidad, and Windward Islands of the West Indies.

A. Pale yellowish or greyish brown above, with two parallel or alternating series of large rhomboidal dark brown spots, descending to the sides, and which may inclose a yellowish ocellus; upper surface of head with dark brown or black spots or marblings, and two dark streaks on each side behind the eye; lower parts yellowish, spotted with brown. (*C. cookii*, Gray.)

- |  |                                |  |
|--|--------------------------------|--|
| a. Hgr. ♂ (Sc. 45; V. 270; C. 118).  | W. Indies.                     | E. Cooke, Esq. [P.]<br>(Type.)                     |
| b. ♀ (Sc. 43; V. 273; C. 118).   | St. Vincent.                   | Mr. H. H. Smith [C.]<br>F. D. Godman, Esq.<br>[P.] |
| c. ♀ (Sc. 45; V. 263; C. 108).   | Becquia Island,<br>Grenadines. | Mr. H. H. Smith [C.]<br>F. D. Godman, Esq.<br>[P.] |
| d-f. Hgr. ♂ (Sc. 41, 41; V. 273, 273; C. 113, 107) & ♀ (Sc. 41; V. 262; C. 106). | Island of Grenada.             | G. Murray, Esq. [P.]                               |
| g. ♂ (Sc. 43; V. 264; C. 112).   | British Guiana.                | Sir R. Schomburgk [P.]                             |

B. Blackish brown above, variegated with yellowish lines (the borders of the markings of the typical form); belly blackish brown. (Var. *melanea*, Gray.)

- |                                |              |                       |
|--------------------------------|--------------|-----------------------|
| h. ♀ (Sc. 43; V. 273; C. ?).   | St. Vincent. | Zoological Society.   |
| i. ♀ (Sc. 43; V. 264; C. 107). | Trinidad.    | J. H. Hart, Esq. [P.] |

C. Yellowish brown above, uniform or with mere traces of the dark markings; belly yellow, without spots.

- |  |                    |                      |
|--|--------------------|----------------------|
| k-n. ♂ (Sc. 41; V. 263; C. 101), ♀ (Sc. 43, 41; V. 270, 264; C. 109, 105), & yg. (Sc. 43; V. 253; C. 105). | Island of Grenada. | G. Murray, Esq. [P.] |
|--|--------------------|----------------------|

D. Olive-brown above, some of the scales yellow, forming more or less distinct festooned lines (the borders of the markings of the typical form); all the scales edged with black, the black predominating on the tail; head with mere traces of the dark markings; belly yellow, with a few small black spots. (*X. ruschenbergii*, Cope.)

- o. ♂ (Sc. 43; V. 263; Rosario de Cuta, Colombia. Mr. C. Webber [C.].  
C. 111).  
p. ♀ (Sc. 47; V. 262; Venezuela. C. 107).

## 2. *Corallus hortulanus*.

*Seba*, *Thes.* i. pl. liv. fig. 2 (1734), & ii. pls. l. & lxxxiv. fig. 1 (1735);  
*Merrem*, *Beitr.* ii. p. 14, pl. ii. (1790).

Coluber hortulanus, *Linn. Mus. Ad. Frid.* p. 37 (1754).

*Boa hortulana*, *Linn. S. N.* i. p. 374 (1766); *Bonmat. Encycl. Méth., Ophiol.* p. 8, pl. iii. fig. 2 (1789); *Schneid. Amph.* ii. p. 245 (1801);  
*Daud. Rept.* v. p. 119 (1803); *Schneid. Denkschr. Ak. Münch.* vii. 1821, p. 114.

— *cnydris*, *Linn. l. c.*; *Bonnat. l. c.* pl. viii. fig. 8.

*Vipera bitis*, *Laur. Syn. Rept.* p. 102 (1768).

— *madarensis*, *Laur. l. c.*

*Coluber maderensis*, *Gmel. S. N.* i. p. 1092 (1788).

— *bitis*, *Gmel. l. c.*

*Boa merremi*, *Schneid. Amph.* ii. p. 259.

— *elegans*, *Daud. t. c.* p. 123, pl. lxi.

*Corallus obtusirostris*, *Daud. t. c.* p. 259.

*Draco hortulanus*, *Oken, Lehrb. Naturg.* iii. p. 277 (1816).

*Xiphosoma ornatum*, *Wagl. in Spix, Serp. Bras.* p. 40, pl. xiv. fig. 2 (1824).

— *dorsuale*, *Wagl. l. c.* p. 43, pl. xv.

— *hortulanum*, *Fitzing. N. Class. Rept.* p. 54 (1826); *Dum. & Bibr.* vi. p. 545 (1844); *Jan, Icon. Gén.* p. 92, l. 7, pl. iii. (1864).

*Boa modesta*, *Reuss, Mus. Senckenb.* i. p. 129 (1834).

— *hortulana*, part., *Schleg. Phys. Serp.* ii. p. 392, pl. xiv. figs. 10 & 11 (1837).

*Corallus hortulanus*, *Gray, Zool. Misc.* p. 42 (1842).

— *maculatus*, *Gray, l. c.*

— *hortulanus*, part., *Gray, Cat.* p. 97 (1849).

Rostral slightly deeper than broad, not or but scarcely visible from above; nasals usually in contact behind the rostral, followed by a pair of large præfrontals; a series of slightly enlarged supraoculars, separated from the eye by one series of scales; 12 to 15 scales from eye to eye across the forehead, and 12 to 17 round the eye; a large præocular and two large loreals; 12 to 14 upper labials, strongly pitted below and behind the eye; anterior lower labials not pitted, posterior deeply pitted. Scales in 51 to 59 rows. Ventrals 270–299; anal entire; subcaudals 108–128. Brown or pale grey-brown above, with two alternating series of large, more or less distinct, dark brown, rhomboidal or roundish spots, which may be edged with yellowish; head usually pale brown, with dark brown streaks edged with yellowish, viz. a curved one on the snout, from eye to eye, another on the middle of the back of the head, and two on each side, behind the eye; head sometimes dark brown with

yellow lines and marblings; lower parts yellowish, more or less profusely spotted with brown.

Total length 1800 millim.; tail 320.

Guianas, Northern Brazil, Ecuador, Northern Peru.

a-b. ♂ (Sc. 55; V. 289; C. 115) & hgr. (Sc. 51; V. 283; C. 118).	British Guiana.	Demerara Mus. [P.].
c. ♀ (Sc. 53; V. 285; C. 126).	Berbice.	Lady Essex [P.].
d. ♀ (Sc. 57; V. 278; C. 124).	Surinam.	(Type of <i>C. maculatus</i> ). Hr. Kappler [C.].
e. Yg. (Sc. 59; V. 291; C. 120).	Guiana.	
f. ♂ (Sc. 55; V. 270; C. 121).	Bahia.	Dr. Wucherer [C.].
g. ♀ (Sc. 57; V. 280; C. 109).	Upper Amazon.	Mr. Bartlett [C.].
h. ♂ (Sc. 55; V. 287; C. 118).	Yurimaguas, Huallaga River, N.E. Peru.	Dr. Hahnel [C.].
i. Yg. (Sc. 55; V. 277; C. 112).	Moyobamba, N.E. Peru.	Mr. A. H. Roff [C.].

### 3. *Corallus annulatus*.

*Xiphosoma annulatum*, Cope, *Journ. Ac. Philad.* viii. 1876, p. 129, pl. xxviii. fig. 6; *Bocourt, Miss. Sc. Mex., Rept.* p. 526, pl. xxxi. fig. 4 (1882).

Rostral deeper than broad; two small shields behind the rostral, separating the nasals; no enlarged supraoculars; 12 scales from eye to eye, across the forehead; three loreals and a præocular; 14 upper labials, all pitted; anterior lower labials not pitted. Scales in 54 rows. Ventrals 260; anal entire; subcaudals 82. Ash-coloured, with darker oval figures on each side; head and lower surfaces uniform.

Total length 755 millim.; tail 132.

Costa Rica.

### 4. *Corallus caninus*.

- Seba, Thes.* ii. pls. xxxiv. figs. 1 & 2, & lxxxi. & xevi. fig. 2 (1835).  
*Boas caninus*, *Linn. Mus. Ad. Frid.* p. 39, pl. iii. (1754).  
*Boa canina*, *Linn. S. N.* i. p. 373 (1766); *Schneid. Hist. Amph.* ii. p. 242 (1801); *Daud. Rept.* v. p. 214 (1803); *Schneid. Denkschr. Ak. Münch.* vii. 1821, p. 112; *Guér. Icon. R. A., Rept.* pl. xix. fig. 2 (1830); *Schleg. Phys. Serp.* ii. p. 388, pl. xiv. figs. 8 & 9 (1837).  
 — *thalassina*, *Laur. Syn. Rept.* p. 89 (1768).  
 — *aurantiaca*, *Laur. l. c.*  
 — *exigua*, *Laur. l. c.*  
 — *hypnale*, *Schneid. Amph.* ii. p. 243.  
*Draco caninus*, *Oken, Lehrb. Naturg.* iii. p. 276 (1816).  
*Xiphosoma araramboya*, *Wagl. in. Spix, Serp. Bras.* p. 45, pl. xvi. (1824).  
 — *caninum*, *Fitzing. N. Class. Rept.* p. 54 (1826); *Dum. & Bibr.* vi. p. 540 (1844); *Gray, Cat.* p. 96 (1849); *Sclater, Zool. Sketches* pl. I. (1861); *Jan, Icon. Gén.* p. 91, l. 7, pl. ii. (1864).  
*Chrysenis batesii*, *Gray, Proc. Zool. Soc.* 1860, p. 132, pl. xxiv.



Rostral as broad as deep or a little broader, deeply pitted on each side, scarcely visible from above, where it is in contact with a pair of small shields separating the nasals; a pair of large prefrontals may be present; enlarged supraocular, if present, separated from the eye by a series of scales; 9 to 12 scales from eye to eye across the forehead, and 10 to 14 round the eye; one or two præoculars, and three loreals (the latter sometimes fused); 12 or 13 upper labials, all except the last deeply pitted; first and last lower labials not pitted. Scales in 61 to 71 rows. Ventrals 188-219; anal entire; subcaudals 64-79. Adult bright green above, with white spots and cross bars, yellow inferiorly. Young yellowish, with the white markings edged with dark green or purplish black.

Total length 1450 millim.; tail 220.

Guianas, Brazil.

- |   |                 |                                      |
|---|-----------------|--------------------------------------|
| a-b. ♀ (Sc. 65; V. 204;<br>C. 74) & yg. (Sc. 65;<br>V. 207; C. 71). | British Guiana. | Demerara Mus. [P.].                  |
| c. ♀ (Sc. 71; V. 207;<br>C. 79).                                    | Surinam.        | Lidth de Jeude Coll.                 |
| d. ♂ (Sc. 63; V. 197;<br>C. 74).                                    | Surinam.        | Hr. Kappler [C.].                    |
| e. ♀ (Sc. 67; V. 196;<br>C. 68).                                    | R. Capin, Para. |                                      |
| f. Yg. (Sc. 69; V. 219;<br>C. 75).                                  | Upper Amazon.   | H. W. Bates, Esq.<br>[P.].           |
| g, h. ♀ (Sc. 63, 61; V.<br>213, 199; C. 78, 74).                    | Brazil.         | (Type of <i>Chrysenis batesii</i> .) |
| i. ♂ (Sc. 67; V. 201;<br>C. 70).                                    | S. America.     | Zoological Society.                  |

### 5. *Corallus madagascariensis*.

*Xiphosoma madagascariensis*, *Dum. & Bibr.* vi. p. 549 (1844); *Jan, Icon. Gén.* p. 93, l. 7, pl. iv. (1864); *Boettg. Abh. Senck. Ges.* xi. 1877, p. 21, and *t. c.* 1879, p. 470.

*Sanzinia madagascariensis*, *Gray, Cat.* p. 99 (1849).

Rostral as broad as deep, just visible from above, followed by two or three pairs of small shields, the anterior of which separate the nasals; the rest of the upper surface of the head covered with small, convex, tubercular scales; some of the scales above the eye may coalesce to form a supraocular shield; 8 to 11 scales across the forehead, from eye to eye; 13 to 15 upper labials, one, two, or three of which enter the eye, with deep pits between them; all the lower labials deeply pitted. Scales in 41 to 53 rows. Ventrals 200-234; anal entire; subcaudals 30-48. Brown or olive above, with two longitudinal series of large roundish or rhomboidal dark brown spots with yellow centre and border; an oblique dark brown streak on each side from the eye to the angle of the mouth; lower parts yellow, uniform or with small brown spots.

Total length 1300 millim.; tail 130.

Madagascar.



- |   |                     |                           |
|---|---------------------|---------------------------|
| a-c. ♂ (Sc. 43, 43, 43;<br>V. 207, 203, 208; C.<br>30, 36, 37).   | S.E. Betsileo.      | Mr. T. Waters [C.].       |
| d-e, f-g, h-i. ♂ (Sc. 41,<br>41; V. 212, 203; C.<br>49, 39), ♀ (Sc. 43, 43;<br>V. 203, 212; C. 42,<br>36), & embryos. | Ankafana, Betsileo. | Rev. W. D. Cowan<br>[C.]. |
| k. Yg. (Sc. 45; V. 200;<br>C. 37).  | Betsileo.           | Rev. G. A. Shaw<br>[C.].  |
| l, m. Yg. (Sc. 53, 49; V.<br>228, 212; C. 46, 38).  | Madagascar.         |                           |

## 10. ENYGRUS.

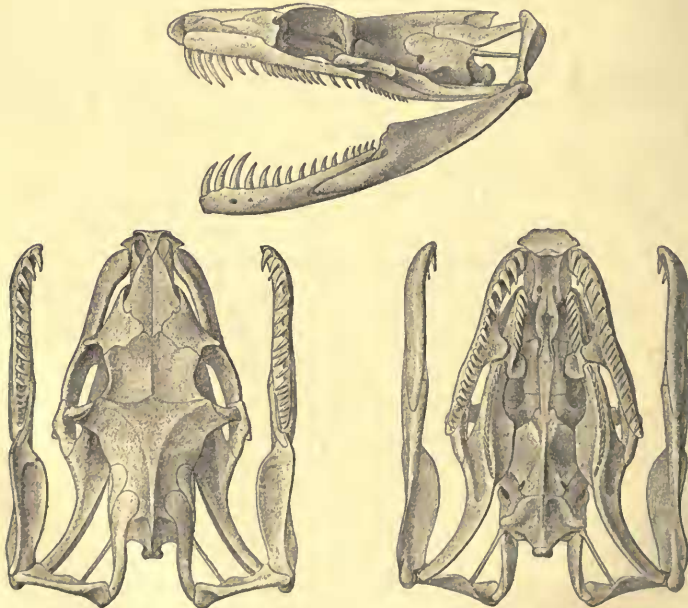
Enygrus, *Wagler, Syst. Amph.* p. 166 (1830); *Dum. & Bibr. Erp. Gén. vi.* p. 476 (1844); *Gray, Cat. Sn.* p. 105 (1849).

Boa, part., *Schleg. Phys. Serp.* ii. p. 373 (1837).

Enygrus, part., *Jan, Icon. Gén. Ophid.* p. 76 (1865).

Erebophis, *Günth. Proc. Zool. Soc.* 1877, p. 131; *Peters & Doria, Ann. Mus. Genova*, xiii. 1878, p. 405.

Fig. 6.

Head of *Enygrus asper*.

Anterior maxillary and mandibular teeth very large, the rest small and subequal. Head distinct from neck, covered with small scales. Eye moderate, with vertical pupil. Body compressed. Scales keeled. Tail short, prehensile; subcaudals single.

Moluccas, Papuasia, Polynesia.

*Synopsis of the Species.*

- Ventrals 232-252; subcaudals 51-62; 37-41 scales round the body; a series of suboculars ..... 1. *australis*, p. 105.
- Ventrals 210-225; subcaudals 50-58; 31-33 scales round the body; a series of suboculars..... 2. *bibronii*, p. 106.
- Ventrals 160-200; subcaudals 38-56; 33-43 scales round the body; two or three labials entering the eye ..... 3. *cariniatus*, p. 107.
- Ventrals 131-146; subcaudals 15-21; 33-39 scales round the body; a series of suboculars ..... 4. *asper*, p. 109.

1. *Enygrus australis*.

*Enygrus bibronii* (non *Hombr. & Jacq.*), *Girard, U.S. Explor. Exped., Herp.* p. 117 (1858); *Bavay, Mém. Soc. Linn. Norm.* xv. 1869, p. 32.

*Boa australis*, *Montrouzier, Rev. et Mag. Zool.* xii. 1860, p. 95.

Snout prominent and obliquely truncate; canthus rostralis rounded. Rostral broader than deep, not visible from above; head-scales small, irregular, with small tubercles or short keels; eleven to fourteen scales from eye to eye across the forehead; eye surrounded by a circle of fourteen to eighteen scales; ten to fourteen upper labials, separated from the eye by a series of scales. Scales rather strongly keeled, the keels forming straight lines on the back; 37 to 41 scales round the thickest part of the body. Ventrals 232-252; anal entire; subcaudals 51-62. Coloration very variable; no black line along the side of the belly.

Total length 1130 millim.; tail 140.

New Britain, Solomon Islands, New Hebrides, Loyalty Islands, Samoa.

A. Brown, olive, or reddish above, with a series of large darker dorsal spots, which may be confluent into a zigzag band; a series of large light spots may be present along each side of the body; a dark streak on each side of the head, passing through the eye, and a dark cross bar from eye to eye; belly spotted with brown or black.

- a. ♂ (Sc. 37; V. 239; Duke of York Island. Rev. G. Brown [C.].  
C. 55).
- b. ♀ (Sc. 41; V. 237; San Christoval. Museum of Economic Geology.  
C. 59).
- c-d. ♀ (Sc. 37; V. 233; Santa Anna Island, H. B. Guppy, Esq.  
C. 58) & hgr. (Sc. 37; Solomons. [P.].  
V. 244; C. 55).
- e. ♀ (Sc. 37; V. 244; Loyalty Islands. Sir G. Grey [P.].  
C. 60).

- f-h.* ♂ (Sc. 39; V. 248; C. 60), ♀ (Sc. 39; V. 245; C. 59), & yg. (Sc. 39; V. 248; C. 60). Samoa Islands. Rev. S. J. Whitmee [P.]
- i-m.* ♀ (Sc. 37, 41; V. 245, 240; C. 61, 54), hgr. (Sc. 40; V. 252; C. 51), & yg. (Sc. 39; V. 237; C. 60). Coast of Savaii. Rev. S. J. Whitmee [P.]
- B. Pale reddish brown above, with a dark brown vertebral stripe edged with yellow; uniform yellow beneath.
- n.* Hgr. (Sc. 41; V. 235; C. ?). New Hebrides. D. McNab, Esq. [P.]
- C. Uniform pale brown or orange above, yellowish beneath.
- o.* ♀ (Sc. 37; V. 244; C. 60). S. Christoval. H.M.S. 'Herald.'
- p.* ♂ (Sc. 37; V. 235; C. ?). S. Christoval. Museum of Economic Geology.
- q.* ♂ (Sc. 37; V. 232; C. 56). Southern island of the Three Sisters, Solomons. H. B. Guppy, Esq. [P.]
- r.* Hgr. (Sc. 39; V. 236; C. 59). New Hebrides. D. McNab, Esq. [P.]
- s.* Yg. (Sc. 39; V. 235; C. 61). Havannah Harbour, New Hebrides. Dr. Corrie [P.]

## 2. *Enygrus bibronii*.

*Enygrus bibronii*, *Hombr. & Jacq. Voy. Pôle Sud, Zool., Rept.* p. 18, pl. i. (1842); *Dum. & Bibr. vi.* p. 483 (1844); *Gray, Cat.* p. 105 (1849); *Jan, Icon. Gén.* p. 77, l. 2, pl. iii. (1861).

Snout prominent and obliquely truncate; canthus rostralis rounded. Rostral broader than deep, not visible from above; head-scales small, irregular, with small tubercles or short keels; ten to fourteen scales from eye to eye across the forehead; eye surrounded by a circle of 14 to 18 scales; 11 to 14 upper labials, separated from the eye by a series of scales. Scales rather strongly keeled, the keels forming straight lines on the back; 31 to 33 scales round the thickest part of the body. Ventrals 210-225; anal entire; subcaudals 50-58. Olive, greenish, or greyish above, with brown, reddish, or black spots, which may be confluent into longitudinal bands on the neck; or reddish brown with black and yellow spots; a dark stripe on each side of the head behind the eye; tail with large, dark, black-edged spots separated by narrow yellow interspaces; lower parts yellowish, uniform or spotted or marbled with black; usually a black line or series of small spots running along the outer border of the ventrals on the anterior part of the body.

Total length 1000 millim.; tail 130.

San Christoval, Fiji, and Tonga Islands.

- a. ♂ (Sc. 31; V. 216; C. 53). San Christoval. Museum of Economic Geology.  
 b, c-d. ♂ (Sc. 32; V. 219; C. 55), ♀ (Sc. 31; V. 212; C. 50), & hgr. (Sc. 33; V. 213; C. 52). Fiji Islands. R. Macgillivray, Esq. [C.].  
 e. ♂ (Sc. 33; V. 223; C. 53). Fiji Islands. H.M.S. 'Herald.'  
 f. ♂ (Sc. 31; V. 218; C. ?). Fiji Islands. Mus. Godeffroy.  
 g. ♀ (Sc. 31; V. 220; C. 51). Friendly Islands. Mus. Godeffroy.  
 h-i. ♂ (Sc. 33; V. 225; C. 51) & yg. (Sc. 33; V. 219; C. 52). New Caledonia (?).  
 k. Hgr. ♂, skel. Fiji Islands. R. Macgillivray, Esq. [C.].

### 3. *Enygrus carinatus*.

- Seba*, *Thes.* ii. pl. xxviii. figs. 3-6 (1735); *Merrem*, *Ann. Wetter. Ges.* ii. 1810, p. 60, pl. ix.  
*Boa carinata*, *Schneid. Hist. Amph.* ii. p. 261 (1801); *Daud. Rept.* v. p. 222 (1803); *Schneid. Denkschr. Akad. Münch.* vii. 1821, p. 118; *Schleg. Phys. Serp.* ii. p. 397, pl. xiv. figs. 12 & 13 (1837).  
*Conchris ocellata*, *Gray, Griff. A. K.* ix. *Syn.* p. 97 (1831).  
*Candoia carinata*, *Gray, Zool. Misc.* p. 43 (1842).  
*Enygrus carinatus*, *Dum. & Bibr.* vi. p. 479 (1844); *Gray, Cat.* p. 105 (1849); *Jan, Icon. Gén.* p. 76, l. 2, pl. ii. fig. 1 (1861); *Peters & Doria, Ann. Mus. Genova*, xiii. 1878, p. 405.  
 — *superciliosus*, *Günth. Ann. & Mag. N. H.* (3) xii. 1863, p. 360, pl. vi. fig. D.

Snout very prominent, obliquely truncate; canthus rostralis angular. Rostral broader than deep, not visible from above; head-scales small, irregular, with small tubercles or short keels; some of the supraocular scales may be enlarged; five to ten scales from eye to eye across the forehead; eye bordered by 10 to 14 scales and two or three labials; 10 to 13 upper labials. Scales strongly keeled, the keels forming straight lines; 33 to 43 scales round the thickest part of the body. Ventrals 160-200; anal entire; subcaudals 38-56. Coloration very variable.

Total length 900 millim.; tail 110.

Pelew Islands, Moluccas, Timor Laut, New Guinea, New Ireland, and New Britain, Solomon Islands.

A. Yellowish or pale brown above, with dark brown markings, some or all of which are confluent into stripes; loreal and temporal regions dark brown, with a few yellowish spots; belly yellowish, powdered with brown in the middle, with elongate dark brown blotches or a stripe on each side.

- a. Hgr. (Sc. 33; V. 166; C. 50). Amboyna.  
 b-c. Hgr. (Sc. 35, 33; V. 183, 179; C. ?, 51). N. Ceram.  
 d. ♀ (Sc. 37; V. 187; C. 52). Mansinam, N. Guinea.



- e-i.* ♀ (Sc. 35, 33, 35; Duke of York Id. Rev. G. Brown [C.].  
V. 181, 181, 186; C. 56,  
51, 50) & yg. (Sc. 35, 35;  
V. 175, 185; C. 50, 53).
- B. Yellowish or brown above, with rhomboidal dark brown or blackish spots, or with a dark zigzag dorsal band; a dark streak on each side of the head, passing through the eye; belly dotted or spotted with black.
- k.* Hgr. (Sc. 33; V. 183; Pelew Islands. G. L. King, Esq. [P.].  
C. 44). (Type of *E. superciliosus*.)
- l.* Hgr. (Sc. 33; V. 170; Amboyna. G. L. King, Esq. [P.].  
C. 50).
- m.* ♀ (Sc. 33; V. 177; N. Ceram. G. L. King, Esq. [P.].  
C. 48).
- n-o.* ♂ (Sc. 35; V. 163; Timor Laut. H. O. Forbes, Esq.  
C. 43) & ♀ (Sc. 33; [C.].  
V. 172; C. 46).
- p.* ♂ (Sc. 37; V. 180; New Guinea, S. of Dr. Comrie [C.].  
C. ?). Huon Gulf.
- q.* ♀ (Sc. 37; V. 184; Normanby, Louisiade B. H. Thomson, Esq.  
C. 47). Archipelago. [P.].
- r.* ♀ (Sc. 39; V. 178; Rossel Isl., Louisiade B. H. Thomson, Esq.  
C. 40). Archipelago. [P.].
- s.* Hgr. (Sc. 35; V. 200; Solomon Islands. G. Krefft, Esq. [P.].  
C. 45).
- t-u.* ♀ (Sc. 43, 43; V. 189, Faro Isl., Solomon H. B. Guppy, Esq.  
188; C. 42, 39). Group. [P.].
- v.* ♀ (Sc. 41; V. 183; Shortland Isl., Solo- H. B. Guppy, Esq.  
C. 40). mon Group. [P.].
- w-δ.* ♂ (Sc. 39, 39; V. 196, Treasury Isl., Solo- H. B. Guppy, Esq.  
196; C. 39, 40), ♀ (Sc. mon Group. [P.].  
39, 39, 43; V. 186, 187,  
187; C. 43, 38, 39), &  
hgr. (Sc. 39, 39, 39; V.  
193, 195, 191; C. 41, 39,  
42).
- ε-η.* ♀ (Sc. 41, 41; V. 185, Florida Isl., Solomon C. M. Woodford,  
187; C. 40, 43) & yg. Esq. [C.].  
(Sc. 41; V. 179; C. 41). Group.
- θ-ι.* ♂ (Sc. 37; V. 188; San Christoval. Mus. of Economic  
C. 41) & hgr. (Sc. 39; Geology.  
V. 192; C. 42).
- κ.* ♀ (Sc. 37; V. 195; San Christoval. H. B. Guppy, Esq.  
C. 46). [P.].
- λ.* ♀ (Sc. 35; V. 194; Sta. Anna Isl., Solo- H. B. Guppy, Esq.  
C. 40). mon Group. [P.].
- μ.* ♀ (Sc. 37; V. 187; Ugi Isl., Solomon H. B. Guppy, Esq.  
C. 40). Group. [P.].
- ν.* ♀ skel. Solomon Islands. H. B. Guppy, Esq.  
[P.].
- C. Yellowish or pale reddish brown above, uniform or with small darker spots.
- ξ.* Hgr. (Sc. 33; V. 178; Pelew Islands. G. L. King, Esq. [P.].  
C. 43). (Type of *E. superciliosus*.)



- o. ♀ (Sc. 37; V. 183; Ternate. H.M.S. 'Challenger.'  
C. 40).  
π. ♀ (Sc. 33; V. 175; Misol.  
C. 48).  
ρ. ♀ (Sc. 33; V. 177; New Guinea, S. of Dr. Comrie [C].  
Huon Gulf.  
σ. ♀ (Sc. 39; V. 187; Solomon Islands. G. Krefft, Esq. [P].  
C. 43).

4. *Enygrus asper*.

*Erebophis asper*, Günth. Proc. Zool. Soc. 1877, p. 132, pl. xxi.;  
*Sauvage*, Bull. Soc. Philom. (7) ii. 1878, p. 39; *Peters & Doria*,  
*Ann. Mus. Genov.* xiii. 1878, p. 406, pl. iv.; *Hübner*, *Notes*  
*Leyd. Mus.* i. 1879, p. 19.

Snout prominent, obliquely truncate; canthus rostralis angular. Rostral broader than deep, not visible from above; head-scales small, irregular, with small tubercles or short keels; eight or nine scales from eye to eye across the forehead; eye surrounded by a circle of 13 or 14 scales; ten or eleven upper labials. Scales strongly keeled, the keels forming oblique lines; 33 to 39 scales round the thickest part of the body. Ventrals 131-146; anal entire; subcaudals 15-21. Reddish brown above, with a dorsal series of large dark-brown, black-edged spots, which may be confluent into a zigzag band; yellowish beneath, uniform or with dark brown spots.

Total length 730 millim.; tail 55.

Misol, Salawatty, New Guinea, and Duke of York Island.

- a. ♀ (Sc. 33; V. 140; C. 16). Andai, N. Guinea.  
b. ♀ (Sc. 39; V. 146; C. 20). Duke of York Isl. Rev. G. Brown [C].  
(Type.)  
c. Skeleton. Duke of York Isl.

## 11. TRACHYBOA.

*Trachyboa*, *Peters*, *Mon. Berl. Ac.* 1860, p. 200.

*Enygrus*, part., *Jan*, *Icon. Gén. Ophid.* p. 76 (1865).

Anterior maxillary and mandibular teeth longest, gradually decreasing in size. Head distinct from neck, covered with scales; no rostral shield; nostril in a single nasal. Eye moderate, with vertical pupil. Body compressed. Scales keeled. Tail short, prehensile; subcaudals single.

South America.

1. *Trachyboa gularis*.

*Trachyboa gularis*, *Peters*, *Mon. Berl. Ac.* 1860, p. 200, pl. —. fig. 1.

*Enygrus gularis*, *Jan*, *Icon. Gén.* p. 77, l. 2, pl. ii. fig. 3 (1861).

Snout scarcely prominent. Upper head-scales small, convex, keeled, a few on the snout transversely enlarged and smooth; eye

bordered by one labial (fifth or sixth) and 11 to 13 scales; 23 to 26 shields round the upper lip; four pairs of shields bordering the mental groove. Scales strongly keeled, in 29 to 31 rows. Ventrals 149-152; anal entire; subcaudals 25-30. Brown above, darker on the top of the head and the middle of the nape; two alternating series of large black spots on each side, the lower largest and extending on the belly, which is yellowish.

Total length 395 millim.; tail 39.

Guayaquil; Brazil.

## 12. UNGALIA.

Boa, part., *Schleg. Phys. Serp.* ii. p. 373 (1837).

Ungalia, *Gray, Zool. Misc.* p. 46 (1842), and *Cat. Sn.* p. 104 (1849).

Tropidophis, *Bibr. in R. de la Sagra, Hist. Cuba, Rept.* p. 207 (1843); *Dun. & Bibr. Exp. Gén.* vi. p. 488 (1844); *Jan, Icon. Gén. Ophid.* p. 74 (1865).

Leionotus, *Bibr. l. c.* p. 211.

Notophis, *Hallow. Proc. Ac. Philad.* 1856, p. 156.

Anterior maxillary and mandibular teeth longest, gradually decreasing in size. Head distinct from neck, covered with shields, viz. a pair of internasals, one or two pairs of prefrontals, a pair of supraoculars, a frontal, and a pair of parietals; nostril between two nasals; no loreal. Eye moderate, with vertical pupil. Body cylindrical or compressed; scales moderate, smooth or keeled. Tail short, pointed, prehensile; subcaudals single.

West Indies (Bahamas, Cuba, Santo Domingo, Jamaica), Guatemala, Ecuador, Peru.

### *Synopsis of the Species.*

#### I. Vertebral scales not enlarged.

- Scales in 23 rows, keeled; ventrals 149-160..... 1. *taczanowskyi*, p. 111.  
 Scales in 25 rows, tectiform; ventrals 208. 2. *moreletii*, p. 111.  
 Scales in 27 or 29 rows, keeled; ventrals 203-224..... 3. *melanura*, p. 111.  
 Scales in 25 to 29 rows, smooth or dorsals feebly keeled; ventrals 171-211..... 4. *maculata*, p. 112.  
 Scales in 23 or 25 rows, smooth; ventrals 142-155..... 5. *pardalis*, p. 113.  
 Scales in 21 or 23 rows, smooth; ventrals 202-205..... 6. *semicineta*, p. 113.

#### II. Scales of vertebral row enlarged.

- Scales in 25 rows, smooth; ventrals 188.. 7. *conjuncta*, p. 113.  
 Scales in 23 rows, keeled; ventrals 168.. 8. *cana*, p. 114.

1. *Ungalia taczanowskyi*.

*Ungalia taczanowskyi*, *Steindachn. Sitzb. Ak. Wien*, lxxx. 1880, p. 522, pl. —.

Head slightly distinct from neck. Rostral a little broader than deep, just visible from above; frontal longer than broad, longer than its distance from the end of the snout or than the parietals; one or two præ- and two postoculars; eight or nine upper labials, fourth and fifth entering the eye. Scales keeled, three outer rows smooth, in 23 rows. Ventrals 149–160; anal entire; subcaudals 25. Brown above, with darker longitudinal streaks or series of spots; a series of large black spots and yellowish dots on each side; sides of belly black; ventrals black and yellow.

Total length 345 millim.; tail 40.

Ecuador and Peru.

a. ♀ (V. 149; C. 25). Guayaquil.

2. *Ungalia moreletii*.

*Tropidophis moreletii*, *Bocourt, Bull. Soc. Philom.* (2) ix. 1885, p. 113.

*Ungalia moreletii*, *Bocourt, Miss. Sc. Mex., Rept.* pl. xlii. fig. 5 (1888).

Head slightly distinct from neck. Rostral slightly broader than deep, visible from above; frontal a little longer than broad, as long as its distance from the end of the snout; parietals short; one præ- and two postoculars; ten upper labials, fourth and fifth entering the eye. Scales tectiform, in 25 rows. Ventrals 208; anal entire; subcaudals 34. Pale brown above, with two longitudinal series of large blackish spots edged with yellowish; a single series of spots on the tail; lower parts yellowish white, with a few small greyish-brown spots on the sides.

Total length 442 millim.; tail 45.

Vera Paz, Guatemala.

3. *Ungalia melanura*.

*Boa melanura*, *Schleg. Phys. Serp.* ii. p. 399 (1837), and *Abbild.* pl. xxvi. (1844).

*Ungalia melanura*, *Gray, Zool. Misc.* p. 46 (1842), and *Cat.* p. 104 (1849); *Cope, Proc. Ac. Philad.* 1868, p. 129; *Gundl. Erp. Cub.* p. 61 (1880).

*Tropidophis melanurus*, *Bibr. in R. de la Sagra, Hist. Cuba, Rept.* p. 208, pl. xxiii. (1843); *Dum. & Bibr. vi.* p. 491 (1844); *Jan, Icon. Gén.* p. 75, l. 5, pl. i. fig. 1 (1864).

*Notophis bicarinatus*, *Hallow. Proc. Ac. Philad.* 1856, p. 156.

Head distinct from neck. Rostral broader than deep, just visible from above; frontal longer than broad, as long as its distance from the end of the snout; parietals short; one præ- and three postoculars; ten upper labials, fourth and fifth entering the eye. Scales in 27 or 29 rows, feebly keeled, four or five outer rows smooth.

Ventrals 203–224; anal entire; subcaudals 32–41. Pale yellowish or greyish brown above, with small darker spots with yellowish ocelli; two dark streaks, more or less distinct, along each side of the body, the upper extending to the head and passing through the eye; a dark vertebral line may be present; end of tail usually blackish; lower parts yellowish, uniform or dotted with brown.

Total length 480 millim.; tail 50.

Cuba.

- a. ♀ (Sc. 27; V. 211; C. 33). Cuba. Zoological Society.  
 b. ♂ (Sc. 29; V. 224; C. 35). —? —?

#### 4. *Ungalia maculata*.

*Leionotus maculatus*, *Bibr. in R. de la Sagra, Hist. Cuba, Rept.* p. 212, pl. xxiv. (1843).

*Boa pardalis*, part., *Gundlach, Arch. f. Nat.* 1840, p. 359.

*Tropidophis maculatus*, part., *Dum. & Bibr. vi.* p. 494 (1844).

*Chilabothrus inornatus*, part., *Gray, Cat.* p. 103 (1849).

*Ungalia maculata*, part., *Gray, l. c.* p. 104 (1849).

*Boa pardalis*, *Gosse, Nat. Soj. Jamaica*, p. 324 (1851).

*Tropidophis maculatus*, *Jan, Icon. Gén.* p. 75, l. 5, pl. ii. fig. 1 (1864).

— *distinctus*, *Jan, l. c.* pl. i. fig. 2.

*Ungalia pardalis*, *Cope, Proc. Ac. Philad.* 1868, p. 129.

— *bucculenta*, *Cope, l. c.*

— *dipsadina*, *Cope, l. c.* p. 130.

— *hætiana*, *Cope, Proc. Am. Philos. Soc.* xviii. 1879, p. 273;

*Garm. op. cit.* xxiv. 1887, p. 279.

— *maculata*, *Gundl. Erp. Cub.* p. 69 (1880).

Head distinct from neck. Rostral a little broader than deep, just visible from above; frontal longer than broad, as long as or a little shorter than its distance from the end of the snout, a little longer than the parietals; one or two præ- and two or three post-oculars; nine or ten upper labials, fourth and fifth or fifth and sixth (rarely fourth or fifth only) entering the eye. Scales smooth, or dorsals feebly keeled, in 25 to 29 rows. Ventrals 171–211; anal entire; subcaudals 27–42. Yellowish, reddish, or greyish brown above, with six or eight longitudinal series of more or less dark, sometimes light-edged, alternating spots, the two middle series largest; a dark streak on each side of the head, passing through the eye; belly yellowish or brownish, with two longitudinal series of large blackish spots which often alternate.

Total length 530 millim.; tail 65.

Cuba, Santo Domingo, Jamaica, Navassa.

- a. ♂ (Sc. 27; V. 183; C. 37). Cuba.  
 b. ♀ (Sc. 25; V. 189; C. 38). S. Domingo.  
 c, d, e. ♀ (Sc. 27; V. 181; C. 28) & yg. Jamaica. P. H. Gosse, Esq. [P].  
 (Sc. 27, 27; V. 174, 182; C. 31, 37).



- f. ♀ (Sc. 25; V. 171; C. 29). Spanish Town, Jamaica.  
 g, h, i, k. ♀ (Sc. 27, 29; V. 189, 192; C. 35, 32) & yg. (Sc. 25, 25; V. 194, 195; C. 34, 36). — ?

### 5. *Ungalia pardalis*.

- Boa pardalis*, part., *Gundlach, Arch. f. Nat.* 1840, p. 359.  
*Tropidophis maculatus*, part., *Dum. & Bibr.* vi. p. 494 (1844).  
*Ungalia maculata*, part., *Gray, Cat.* p. 104 (1849).  
 — *maculata*, *Cope, Proc. Ac. Philad.* 1868, p. 129.  
*Ungalia curta*, *Garm. Proc. Am. Philos. Soc.* xxiv. 1887, p. 279.

Head distinct from neck. Rostral a little broader than deep, just visible from above; frontal longer than broad, as long as its distance from the end of the snout; parietals short; one præ- and three postoculars; ten upper labials, fourth and fifth entering the eye. Scales perfectly smooth, in 23 or 25 rows. Ventrals 142–155; anal entire; subcaudals 24–30. Pale brown above, with six longitudinal series of alternating dark brown spots, the two dorsal series largest and close together; a dark patch on the crown, a cross bar on the snout, and a dark streak on each side of the head, passing through the eye; lower parts yellowish, spotted with dark brown.

Total length 250 millim.; tail 30.

Cuba.

- a. ♀ (Sc. 23; V. 155; C. 30). Cuba. P. B. Webb, Esq. [P.].

### 6. *Ungalia semicineta*.

- Ungalia* (*Lionotus*) *maculata*, var. *semicineta*, *Gundl. & Peters, Mon. Berl. Ac.* 1864, p. 388.  
 — *semicineta*, *Gundl. Repert. fis. Cuba*, ii. 1868, p. 115; *Cope, Proc. Ac. Philad.* 1868, p. 130; *Gundl. Exp. Cub.* p. 70 (1880).

Like *U. maculata*, but scales in 21 or 23 rows. Ventrals 202–205. A single series of large black spots on each side of the body; these spots often confluent and forming cross bands.

Cuba.

### 7. *Ungalia conjuncta*.

- Tropidophis conjunctus*, *Fischer, Jahrb. Hamb. Wiss. Anst.* v. 1888, p. 31, pl. iii. fig. 5.

Head distinct from neck. Rostral just visible from above; a single pair of præfrontals; frontal longer than broad, longer than its distance from the end of the snout; parietals short; one præ- and three postoculars; ten upper labials, fourth and fifth entering the eye. Scales in 25 rows, perfectly smooth, of vertebral row enlarged and hexagonal. Ventrals 188; anal entire; subcaudals 40. Greyish brown above, with six longitudinal rows of black



spots, the two middle ones largest and close together; beneath with large black spots.

Total length 430 millim.; tail 44.

Santo Domingo.

### 8. *Ungalia cana*.

*Ungalia cana*, Cope, *Proc. Ac. Philad.* 1868, p. 129.

Head rather wide behind. One præ- and three postoculars; ten upper labials. Scales in 23 rows, keeled, except six outer rows, vertebral row enlarged. Ventrals 168. Grey-brown above, with a more or less distinct dorsal series of transverse darker spots; a brown band from the eye to the neck; below yellowish grey, densely punctated at middle of ventrals.

Total length 340 millim.; tail 35.

Inagua Island, Bahamas.

## 13. UNGALIOPHIS.

*Ungaliophis*, F. Müller, *Verh. nat. Ges. Basel*, vii. 1882, p. 142.

*Peropodum*, Bocourt, *Miss. Sc. Mex., Rept.* p. 522 (1882).

Anterior maxillary and mandibular teeth longest. Head distinct from neck, covered with shields, viz. a large azygous præfrontal, a pair of supraoculars, a frontal, and a parietal; loreal present; nostril between three shields. Eye moderate; pupil vertical. Body strongly compressed; scales moderate and smooth. Tail short, prehensile; subcaudals single.

Guatemala.

### 1. *Ungaliophis continentalis*.

*Peropodum* n. sp. et g., F. Müll. *Verh. nat. Ges. Basel*, vi. 1878, p. 652, pl. i.

*Ungaliophis continentalis*, F. Müll. *op. cit.* vii. 1882, p. 142.

*Peropodum guatemalensis*, Bocourt, *Miss. Sc. Mex., Rept.* p. 523, pl. xxxi. fig. 5 (1882).

Head slightly distinct from neck. Rostral visible from above; præfrontal larger than the frontal, which is subcordiform and as long as broad; parietal short; loreal as long as deep; one præ- and two postoculars; ten upper labials, fourth and fifth entering the eye. Scales in 25 rows. Ventrals 258; anal entire; subcaudals 47. Pale greyish brown above; a large black blotch, edged with yellow, on the head, bifurcating posteriorly and extending as two stripes on the neck; two alternating series of large oval black, yellow-edged spots on the back; a lateral series of smaller spots; a black streak from the nostril to the eye, and two others, diverging, behind the eye; lower parts speckled with black and yellow.

Total length 760 millim.; tail 80.

North-western Guatemala.

## 14. EUNECTES.

Boa, part., *Linn. Syst. Nat.* i. p. 373 (1766); *Schleg. Phys. Serp.* ii. p. 373 (1837).

Draco (non Laur.), part., *Oken, Lehrb. Naturg.* iii. p. 273 (1816).

Eunectes, *Wagl. Syst. Amph.* p. 167 (1830); *Dum. & Bibr. Erp. Gén.* vi. p. 527 (1844); *Gray, Cat. Sn.* p. 102 (1849); *Jan, Icon. Gén.* p. 83 (1864).

Anterior maxillary and mandibular teeth longest, gradually decreasing in size. Head distinct from neck: snout covered with shields; nostril directed upwards, between three nasals, the upper of which are in contact behind the rostral. Eye small, with vertical pupil. Body cylindrical; scales very small, smooth. Tail short, slightly prehensile; subcaudals single.

South America.

## 1. Eunectes murinus.

*Seba, Thes.* ii. pl. xxix. fig. 1 (1735).

Boa murina, *Linn. S. N.* i. p. 374 (1766); *Schneid. Hist. Amph.* ii. p. 241 (1801); *Daud. Rept.* v. p. 155 (1803); *Schneid. Denkschr. Ak. Münch.* vii. 1821, p. 108; *Schleg. Phys. Serp.* ii. p. 380, pl. xiv. figs. 1 & 2 (1837).

— scytale, part., *Linn. l. c.*

— scytale, *Schneid. Hist. Amph.* ii. p. 248.

— gigas, *Latr. Rept.* iii. p. 136 (1802).

— anacondo, *Daud. t. c.* p. 161, pl. lxiii. fig. 2.

— aquatica, *Wied, Beitr. Nat. Bras.* i. p. 226 (1825), and *Abbild.* (1831).

*Eunectes murinus*, *Gray, Griff. A. K.* ix., *Syn.* p. 96 (1831); *Dum. & Bibr.* vi. p. 528 (1844); *Gray, Cat.* p. 102 (1849); *Jan, Icon. Gén.* p. 84, l. 6, pl. iii. (1864).

Rostral as broad as deep, scarcely visible from above: a pair of large prefrontals, followed by smaller shields; a large loreal, a large præocular, and a large supraocular; three postoculars and two suboculars, separated from the labials by a series of small shields; fifteen to seventeen upper labials. Scales smooth, in 57 to 63 rows. Ventrals 242-266; anal entire; subcaudals 56-73. Greyish brown or olive above, with a single series or with two alternating series of large blackish transverse spots and one or two lateral series of blackish ocelli with white centres; top of the head dark, separated from the paler sides by a black streak forming a point on the snout; an oblique black streak on each side of the head, behind the eye; lower parts whitish, spotted with black.

Total length 6600 millim.; is said to attain a length of 10 metres (33 feet).

Guianas, Brazil, N.E. Peru.

a, b. Hgr. ♂ (Sc. 59; V. 247; C. 66) & yg. (Sc. 59; V. 247; C. 63).

c. Yg. (Sc. 63; V. 245; C. 67).

d. Hgr., stffd.

Surinam.

Lidth de Joude  
Collection.

British Guiana.  
Para.

- c, f.* Yg. (Sc. 59, 61; V. 248, 251; C. 64, 71). Brazil.  
*g, h.* Ad., stiffd. S. America.  
*i.* Hgr., skel. S. America.  
*k.* Hgr., skull. Cayenne.

## 15. BOA.

- Boa, part., *Linn. Syst. Nat.* i. p. 373 (1766); *Schleg. Phys. Serp.* ii. p. 373 (1837).  
 Constrictor, *Laur. Syn. Rept.* p. 106 (1768).  
 Boa, *Wagl. Syst. Amph.* p. 169 (1830); *Dum. & Bibr. Erp. Gén.* vi. p. 500 (1844); *Gray, Cat. Sn.* p. 99 (1849); *Jan, Icon. Gén.* p. 80 (1864); *Bocourt, Miss. Sc. Mex., Rept.* p. 517 (1882).  
 Draco (non *Laur.*), part., *Oken, Lehrb. Naturg.* iii. p. 273 (1816).  
 Pelophilus (non *Def.*), *Dum. & Bibr. t. c.* p. 523; *Gray, l. c.* p. 101; *Jan, l. c.* p. 84.  
 Acrantophis, *Jan, l. c.* p. 82; *Bocourt, l. c.* p. 521.

Anterior maxillary and mandibular teeth longest, gradually decreasing in size. Head distinct from neck, covered with small scales, with or without enlarged shields on the loreal and supra-ocular regions; nostril between two or three nasals. Eye rather small, with vertical pupil. Body cylindrical or feebly compressed; scales very small, smooth. Tail short, more or less prehensile; subcaudals all or part single.

Tropical America; Madagascar.

*Synopsis of the Species.*

- I. Loreal region with small scales or a single small shield; subcaudals 45 to 69.
- Scales in 81 to 95 rows on the thickest part of the body; ventrals 234-243; rostral a little broader than deep; symphyseal at least as long as broad . . . . . 1. *constrictor*, p. 117.
- Scales in 65 to 87 rows; ventrals 242-251; rostral as deep as broad; symphyseal broader than long . . . . . 2. *occidentalis*, p. 118.
- Scales in 65 to 75 rows; ventrals 258-275; rostral a little broader than deep; symphyseal at least as long as broad . . . . . 3. *diviniloqua*, p. 118.
- Scales in 61 to 79 rows; ventrals 225-252; rostral as deep as broad; symphyseal at least as long as broad . . . . . 4. *imperator*, p. 119.
- Scales in 55 rows . . . . . 5. *mexicana*, p. 119.
- II. Loreal region with several shields; subcaudals 20 to 41.
- Scales in 59 to 65 rows; subcaudals 20 to 33 . . . . . 6. *dumerilii*, p. 120.
- Scales in 69 to 77 rows; subcaudals 34 to 41 . . . . . 7. *madagascariensis*,  
 [p. 120.]

1. *Boa constrictor*.

*Linn. Amæn. Acad.* i. p. 497, pl. xvii. fig. 3 (1749).

*Boa constrictor*, *Linn. S. N.* i. p. 373 (1766); *Schneid. Denkschr. Ak. Münch.* vii. 1821, p. 114, pl. vi. fig. 1; *Wied, Beitr. Nat. Bras.* i. p. 211 (1825); *Dum. & Bibr.* vi. p. 507 (1844); *Gray, Cat.* p. 100 (1849); *Jan, Icon. Gén.* p. 81, l. 6, pl. i. (1864).

*Constrictor formosissimus*, *Laur. Syn. Rept.* p. 107 (1768).

— *rex-serpentum*, *Laur. l. c.*

— *auspex*, *Laur. l. c.* p. 108.

*Boa constrictrix*, *Schneid. Hist. Amph.* ii. p. 247 (1801).

— *constrictor*, part., *Daud. Rept.* v. p. 174 (1803); *Schleg. Phys. Serp.* ii. p. 373, pl. xiv. figs. 6 & 7 (1837).

Snout slightly prominent in the adult, obliquely truncate in the young. Rostral a little broader than deep; symphysial at least as long as broad; head-scales small, slightly larger on the snout; no shields; one of the præoculars slightly enlarged; 18 to 24 scales across the forehead, from eye to eye; 16 to 20 scales round the eye, which is separated from the labials by two or three series of scales; 21 to 25 upper labials. Scales in 81 to 95 rows. Ventrals 234–243; anal entire; subcaudals 49–60. Pale brown above, with 15 to 20 dark brown cross bars widening on each side and, if connected by a dark dorso-lateral streak, enclosing large elongate oval or elliptical spots of the pale ground-colour; a light longitudinal line in the outer widened portion of the dark cross bars; on each side a series of large dark brown spots with light centres, most of which alternate with the dorsal bars; on the tail the markings become much larger, brick-red, edged with black, and separated by narrow yellowish interspaces; head with a dark brown median line extending from between the nostrils to the nape, widening behind, sometimes loop-shaped; a crescentic blackish marking on the rostral; a dark brown streak on each side of the head, passing through the eye, and sending down a process between the end of the snout and the eye; a dark brown bar below the eye and two on each side of the lower lip; belly yellowish, dotted, or dotted and spotted with black.

Total length 3355 millim.; tail 330. Reaches to 12 feet (*Wied*).

South America, from Venezuela to Buenos Ayres.

<i>a, b.</i> Yg. (Sc. 89, 87; V. 238, 237; C. 49, 55).	Tobago.	W. A. Ludlam, Esq. [P.].
<i>c.</i> Yg. (Sc. 95; V. 240; C. 50).	Trinidad.	
<i>d.</i> Yg. (Sc. 93; V. 239; C. 54).	Cayenne.	
<i>e.</i> ♂ (Sc. 89; V. 238; C. 56).	Para.	J. P. Smith, Esq. [P.].
<i>f.</i> Yg. (Sc. 87; V. 243; C. 51).	Pernambuco.	W. A. Forbes, Esq. [P.].
<i>g-h.</i> Yg. (Sc. 85, 85; V. 241, 238; C. 56, 50).	Moyobamba, N.E. Peru.	Mr. A. H. Roff [C.].
<i>i, k, l.</i> ♀ & hgr., stfid.	S. America.	
<i>m.</i> Ad., skel.	Trinidad.	Lord Harris [P.].
<i>n.</i> Hgr., skel.	—?	
<i>o.</i> Hgr., skull.	Cayenne.	



2. *Boa occidentalis*.

*Boa occidentalis*, *Philippi*, *Zeitschr. f. ges. Naturw.* xi. 1873, p. 127, pl. iii.

Snout slightly prominent. Rostral as broad as deep, not visible from above; symphyisial broader than long; head-scales small, largest on the snout; no shields; one of the præoculars slightly enlarged; 15 to 18 scales across the forehead, from eye to eye; 16 to 20 scales round the eye, which is separated from the labials by two or three series of scales; 21 or 22 upper labials. Scales in 64 to 87 rows. Ventrals 242-251; anal entire; subcaudals 45. Dark brown above, with yellowish markings, mostly in the form of rings and small spots; head brown, with the markings as in *B. constrictor*, but less distinct and bordered with yellowish; lower parts yellowish, dotted and marbled with brown.

Total length 2200 millim.

Argentine Republic (provinces Mendoza, San Juan, and Cordoba).

a. ♂ (Sc. 87; V. 242; C. ?). Salt Desert, Prov. E. C. Knight, Esq.  
Cordoba. [P.]

3. *Boa diviniloqua*.

*Seba*, ii. pl. C. fig. 1 (1734).

? *Boa ophrias*, *Linn. S. N.* i. p. 374 (1766).

*Constrictor diviniloquus*, *Laur. Syn. Rept.* p. 108 (1768).

*Boa constrictor*, part., *Daud. Rept.* v. p. 174 (1803); *Schleg. Phys. Serp.* ii. p. 373 (1837).

— *diviniloqua*, *Dum. & Bibr.* vi. p. 515 (1844); *Gray, Cat.* p. 100 (1849); *Jan, Icon. Gén.* p. 81, l. 5, pl. iii. (1864).

Snout rather prominent, obliquely truncate. Rostral a little broader than deep; symphyisial at least as long as broad; head-scales small, a little enlarged on the snout; no shields; one of the præoculars slightly enlarged; 18 to 20 scales across the forehead, from eye to eye; 14 to 19 scales round the eye, which is separated from the labials by one or two rows of scales. Scales in 65 to 75 rows of scales. Ventrals 258-275; anal entire; subcaudals 55-69. Brown or olive above, with 25 to 30 darker spots or cross bands on the body, and a lateral series of spots and vertical bars with light centres; head-markings as in *B. constrictor*, but sometimes rather indistinct; the longitudinal line on the head broader, often interrupted or scalloped; tail black and yellow; lower parts yellowish, spotted and dotted with black or olive, sometimes entirely blackish.

Total length 2100 millim.; tail 170.

Dominica, St. Lucia, Trinidad.

a-b. ♀ (Sc. 69; V. 265; C. 52)	Dominica.	G. A. Ramage, Esq.
& yg. (Sc. 67; V. 258; C. 60).		[C.]
c. Ad., stffid.	St. Lucia.	Zoological Society.
d, e. ♂ (Sc. 73; V. 275; C. 66)	Trinidad.	
& ♀ (Sc. 67; V. 272; C. 55).		
f, g. ♂ (Sc. 71; V. 274; C. 66)	— ?	Zoological Society.
& ♀ (Sc. 71; V. 282; C. 65).		



4. *Boa imperator*.

- Boa imperator*, *Daud. Rept.* v. p. 150 (1803); *Dum. & Bibr.* vi. p. 519 (1844); *Gray, Cat.* p. 101 (1849); *Jan, Icon. Gén.* p. 81, l. 6, pl. i. (1864); *F. Müller, Verh. nat. Ges. Basel*, vi. 1878, p. 650; *Bocourt, Miss. Sc. Mex., Rept.* p. 519, pl. xxx. fig. 8 (1882); *Garm. N. Am. Rept.* p. 8 (1883); *Cope, Bull. U.S. Nat. Mus.* no. 32, 1887, p. 65. — eques, *Eyd. & Soul. Voy. Bonite, Zool.* i. p. 144, *Rept.* pl. iv. (1841); *Dum. & Bibr. t. c.* p. 521; *Gray, l. c.*; *Cope, Proc. Ac. Philad.* 1861, p. 303; *Jan, l. c.* p. 82, l. 6, pl. ii. — *ortonii*, *Cope, Proc. Am. Philos. Soc.* xvii. 1878, p. 35. — *constrictor*, var. *isthmica*, *Garm. l. c.* p. 9.

Snout scarcely prominent. Rostral as broad as deep, not visible from above; symphysial at least as long as broad; head-scales small, sometimes slightly enlarged on the snout; an enlarged loreal sometimes present, in front of the præoculars, one of which is more or less enlarged; 15 to 18 scales across the forehead, from eye to eye; 14 to 20 scales round the eye, which is separated from the labials by one or two series of scales; 18 to 21 upper labials. Scales in 61 to 79 rows. Ventrals 225–252; anal entire; subcaudals 47–65. Coloration as in *B. constrictor*, but no red on the tail, and dorsal cross bars more numerous, viz. 22 to 30 on the body; the dark line on the middle of the head usually with a process on each side between the eye, thus forming a cross.

Total length 2800 millim.; tail 280.

Mexico to Western South America (Colombia to Peru).

- |  |                           |   |
|--|---------------------------|---|
| a. Yg. (Sc. 79; V. 238; C. 59).                                | Ventanas, Mexico.         | Hr. A. Forrer [C.].                               |
| b. Yg. (Sc. 69; V. 235; C. 49).                                | Atoyac, Mexico.           | Mr. H. H. Smith [C.].<br>F. D. Godman, Esq. [P.]. |
| c-d. ♀ (Sc. 67; V. 239; C. 54) & hgr. (Sc. 79; V. 248; C. 53). | S. Mexico.                | F. D. Godman, Esq. [P.].                          |
| e. ♀ (Sc. 69; V. 233; C. 49).                                  | Mexico.                   | M. Sallé [C.].                                    |
| f. Yg. (Sc. 69; V. 242; C. 50).                                | Mexico.                   | E. Cooke, Esq. [P.].                              |
| g. Yg. (Sc. 71; V. 225; C. 61).                                | Mexico.                   |   |
| h. ♀ (Sc. 65; V. 236; C. 57).                                  | Vera Paz, low forest.     | O. Salvin, Esq. [C.].                             |
| i. ♀ (Sc. 69; V. 242; C. 54).                                  | Guatemala.                | O. Salvin, Esq. [C.].                             |
| k. ♀, skin (Sc. 69; V. 243; C. 55).                            | Costa Rica.               | F. D. Godman, Esq. [P.].                          |
| l. Hgr. ♂ (Sc. 79; V. 246; C. 65).                             | Esmeralda, Ecuador.       | Mr. Fraser [C.].                                  |
| m. Yg. (Sc. 77; V. 231; C. 58).                                | N.W. coast of S. America. | Lieut. Wood [P.].                                 |
| n, o. Hgr., stfdd.   | Tropical America.         |   |

5. *Boa mexicana*.

- Boa mexicana*, *Jan, Icon. Gén.* p. 82 (1864); *Bocourt, Miss. Sc. Mex., Rept.* p. 520, pl. xxx. fig. 9 (1882). — *diviniloquax*, var. *mexicana*, *Jan, op. cit.* l. 5, pl. iv.

Closely allied to *B. imperator*, but with only 55 scales across the body. Markings as in that species, but no dark line along the middle of the head.

Mexico.

### 6. *Boa dumerilii*.

*Aerantophis dumerilii*, *Jan, Icon. Gén.* p. 83, l. 1, pl. ii. (1860);  
*Bocourt, Miss. Sc. Mex., Rept.* p. 522 (1882).

Snout slightly prominent. Rostral a little broader than deep, not visible from above; symphyseal longer than broad; upper surface of head covered with small scales which are not larger than on the body; 11 to 16 scales across the forehead, from eye to eye, and as many round the eye; præocular large; several slightly enlarged loreals; 17 to 19 upper labials. Scales in 59 to 65 rows. Ventrals 225–236; anal entire; subcaudals 20–33. Pale grey-brown above, with two longitudinal series of elongate black spots emitting a transverse process above, a hoop-shaped figure below; these markings may be disposed regularly in pairs and unite by their transverse processes, or alternately; two or three black streaks on each side behind the eye, the lower continued in front of the eye to the nostril; a black cross line or ring on the forehead between the eyes; lower parts whitish, uniform or spotted with brown.

Total length 1950 millim.; tail 110.

Madagascar.

- |                                     |             |
|-------------------------------------|-------------|
| a. Hgr. (Sc. 65; V. 225; C. 30).    | Madagascar. |
| b. ♂, skin (Sc. 61; V. 236; C. 33). | Madagascar. |
| c. Several embryos.                 | Madagascar. |

### 7. *Boa madagascariensis*.

*Pelophilus madagascariensis*, *Dum. & Bibr.* vi. p. 524 (1844); *Gray, Cat.* p. 102 (1849); *Jan, Icon. Gén.* p. 85, l. 2, pl. iv. (1861);  
*Boettg. Abh. Senck. Ges.* xi. 1877, p. 20.

Snout scarcely prominent. Rostral broader than deep, not visible from above; symphyseal longer than broad; upper surface of snout with small polygonal shields; a large supraocular and a series of supraæiliaries; six to nine shields surround the eye; a large præocular and two loreals, separated from the labials by a series of small shields; 16 or 17 upper labials. Scales in 69 to 77 rows. Ventrals 221–235; anal entire; subcaudals 34–41. Pale brown above, with elongate dark brown black-edged spots; a vertebral series of spots connected by a longitudinal streak; a lateral series of large spots which may, at intervals, run into a band; below the latter a series of dark rings or ocelli with light centres; a dark streak on each side of the head, running through the eye; lips with large black spots; lower parts yellowish white, with small blackish spots.

Total length 1650 millim.; tail 120.

Madagascar.

- |                               |             |                      |
|-------------------------------|-------------|----------------------|
| a. ♀ (Sc. 73; V. 232; C. 34). | Madagascar. | Zoological Society.  |
| b. Head of adult.             | Madagascar. | Sir E. Belcher [P.]. |

## 16. CASAREA.

Boa, part., *Schleg. Phys. Serp.* ii. p. 373 (1837).

Casarea, *Gray, Zool. Miscell.* p. 43 (1842), and *Cat. Sn.* p. 106 (1849).

Leptoboa, *Dum. & Bibr. Erp. Gén.* vi. p. 485 (1844); *Jan, Icon. Gén.* p. 79 (1865).

Anterior maxillary and mandibular teeth much longer than the posterior. Head very small, distinct from neck; snout covered with shields; nostril pierced in a single nasal. Eye small, with vertical pupil. Body cylindrical, slender; scales very small, keeled. Tail long, prehensile; subcaudals single.

Round Island, near Mauritius.

1. *Casarea dussumieri*.

*Boa dussumieri*, *Schleg. Phys. Serp.* ii. p. 396 (1837), and *Abbild.* pl. xvii. figs. 1-5 (1839).

*Casarea dussumieri*, *Gray, Zool. Miscell.* p. 43 (1842), and *Cat.* p. 106 (1849).

*Leptoboa dussumieri*, *Dum. & Bibr.* vi. p. 186 (1844); *Jan, Icon. Gén.* p. 79, l. 2, pl. i. (1861).

Snout prominent, obliquely truncate. Rostral broader than deep, not or but scarcely visible from above; a pair of internasals, one or two pairs of præfrontals, and a large supraocular; these shields rough with small tubercles; one or two præ- and four to six postoculars; three to five rows of small keeled scales between the supraoculars; eleven or twelve upper labials, second and third in contact with the præfrontals, fifth and sixth entering the eye. Scales strongly keeled, in 47 to 53 rows. Ventrals 227-235; anal entire; subcaudals 120-133. Pale brown above, uniform or with two dark stripes and a lateral series of small dark spots; a dark streak on each side of the head, passing through the eye; belly yellowish, uniform or with small black spots; lower surface of tail with large black spots.

Total length 660 millim.; tail 180. Reaches a length of 1260 millim.

Round Island, near Mauritius.

*a-b.* Hgr. (Sc. 47; V. 230; C. 123) Round Island. Sir H. Barkly [P.] & yg. (Sc. 47; V. 227; C. 120).

## 17. BOLIERIA.

*Tortrix*, part., *Schleg. Phys. Serp.* ii. p. 1 (1837).

*Bolyeria*, *Gray, Zool. Miscell.* p. 46 (1842), and *Cat. Sn.* p. 106 (1849).

*Platygaster* (*non Latr.*), *Dum. & Bibr. Erp. Gén.* vi. p. 496 (1844); *Jan, Icon. Gén. Ophid.* p. 78 (1865).

Anterior maxillary and mandibular teeth a little longer than the

posterior. Head very small, not distinct from neck; snout covered with shields; nostril pierced in a single nasal. Eye very small, with vertical pupil. Body cylindrical. Scales small, hexagonal, juxtaposed or very feebly imbricate, tri- or quinquedecarinate. Tail moderate, feebly prehensile; subcaudals single.

Round Island, near Mauritius.

### 1. *Bolieria multicarinata*.

*Eryx multicarinata*, *Boie, Isis*, 1827, p. 513; *Schleg. Bijdr. tot de Dierk.* i. p. 2 (1848).

*Tortrix pseudo-eryx*, *Schleg. Phys. Serp.* ii. p. 19 (1837), and *Abbild.* pl. xxxiv. (1839).

*Bolyeria pseudo-eryx*, *Gray, Zool. Miscell.* p. 46 (1842).

*Platygaster multicarinatus*, *Dum. & Bibr.* vi. p. 497 (1844); *Jan, Icon. Gén.* p. 79, l. 3, pl. iii. (1864).

*Bolyeria multicarinata*, *Gray, Cat.* p. 106 (1849); *Kreffl, Proc. Zool. Soc.* 1862, p. 225.

Snout very prominent, rounded. Rostral broader than deep, just visible from above; a pair of internasals, a pair of large præfrontals, a large supraocular, two præoculars, four or five postoculars; nine upper labials, first and second, or second only, in contact with the præfrontal, fourth entering the eye. Scales in 53 to 57 rows. Ventrals 192-200; anal entire; subcaudals 83-92. Pale brown or greyish olive above, with small darker spots, which may form an irregular network; a dark streak on each side of the head behind the eye; a series of blackish vertical bars on each side of the tail; yellowish beneath, spotted or marbled with blackish.

Total length 1000 millim.; tail 200.

Round Island, near Mauritius.

a-b. ♀ (Sc. 53, 57; V. 199, 200; Round Island. Sir H. Barkly [P.]. C. 92, 83).

### 18. *ERYX*.

*Eryx*, part., *Daud. Rept.* vii. p. 251 (1803).

*Clothonia*, *Daud. t. c.* p. 283; *Gray, Cat. Sn.* p. 110 (1849).

*Eryx*, *Wagl. Syst. Amph.* p. 192 (1830); *Dum. & Bibr. Erp. Gén.* vi. p. 454 (1844); *Gray, l. c.* p. 109; *Günth. Rept. Brit. Ind.* p. 334 (1864); *Jan, Icon. Gén. Ophid.* p. 70 (1865); *Bouleng. Faun. Ind., Rept.* p. 247 (1890).

*Gongylophis*, *Wagl. l. c.*; *Gray, l. c.* p. 108; *Günth. l. c.* p. 332; *Bouleng. l. c.* p. 246.

*Tortrix*, part., *Schleg. Phys. Serp.* ii. p. 1 (1837).

*Cursoria*, *Gray, l. c.* p. 107.

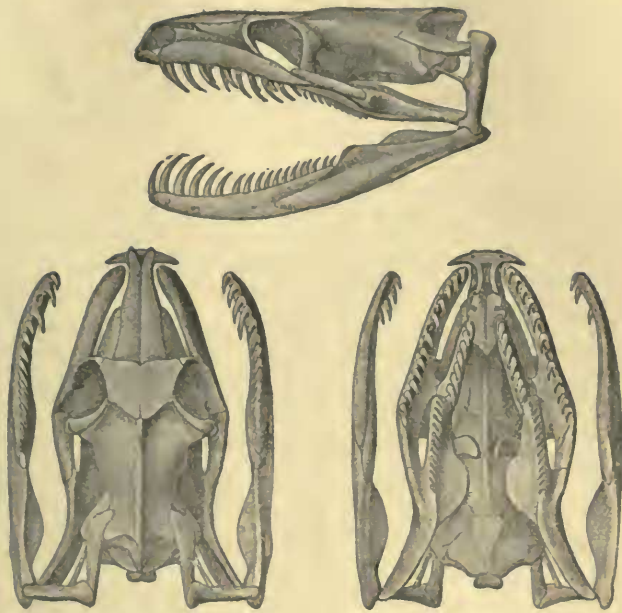
*Cursoria*, *Günth. l. c.* p. 333.

Anterior maxillary and mandibular teeth longer than the posterior. Head not distinct from neck, covered with small scales; rostral large. Eye small or very small, with vertical pupil. Body cylindrical. Scales small, smooth or keeled. Tail very short, not or but very slightly prehensile; subcaudals single.

North and East Africa; Southern and Central Asia.



Fig. 7.

Skull of *Eryx conicus*.*Synopsis of the Species.*

- I. Eyes latero-superior, separated from each other by five or more longitudinal series of scales.
- A. Rostral without angular edge; 8 to 10 keeled scales from eye to eye across the forehead; tail pointed; scales in 40 to 49 rows . . . . . 1. *conicus*, p. 124.
- B. Rostral with a sharp horizontal edge; head-scales smooth.
1. Tail pointed, ending in a conical scute; 12 to 15 scales from eye to eye across the forehead; scales in 47 to 53 rows.  
2. *thebaicus*, p. 125.
2. Tail obtuse; 5 to 9 scales from eye to eye across the forehead.
- 40 to 50 scales across the body; ventrals 165-200 . . . . . 3. *jaculus*, p. 125.
- 54 to 65 scales across the middle of the body; ventrals 194-210 . . . . . 4. *johnii*, p. 127.
- 36 scales across the body; ventrals 184 . . . . . 5. *elegans*, p. 128.



3. Tail pointed, ending in a curved, claw-like horny scute; five smooth scales across the forehead: scales in 41 to 45 rows . . . . . 6. *muelleri*, p. 128.
- II. Eyes entirely on the upper surface of the head, separated from each other by four longitudinal series of scales; tail pointed, ending in a curved, claw-like horny scute.  
7. *jayakari*, p. 129.

### 1. *Eryx conicus*.

- Russell, Ind. Serp.* i. pl. iv. (1796).  
*Boa conica, Schneid. Hist. Amph.* ii. p. 268 (1801), and *Denkschr. Akad. Münch.* vii. 1821, p. 119, pl. vi. fig. 2.  
 — *viperina, Shaw, Zool.* iii. p. 355, pl. C (1802).  
 — *ornata, Daud. Rept.* v. p. 210 (1802).  
*Eryx bengalensis, Guér. Icon. R. A., Rept.* pl. xx. fig. 1 (1830).  
*Tortrix eryx, var. bengalensis, Schleg. Phys. Serp.* ii. p. 17 (1837).  
*Gongylophis conicus, Gray, Zool. Misc.* p. 45 (1842), and *Cat.* p. 108 (1849); *Günth. Proc. Zool. Soc.* 1860, p. 163, and *Rept. Brit. Ind.* p. 333 (1864); *Theob. Cat. Rept. Brit. Ind.* p. 207 (1876); *Murray, Zool. Sind*, p. 336 (1884); *Bouleng. Faun. Ind., Rept.* p. 247, fig. (1890).  
*Eryx conicus, Dum. & Bibr.* vi. p. 470 (1844); *Schleg. Bijdr. tot de Dierk.* i. p. 2 (1848); *Jan, Icon. Gén.* p. 73, l. 4, pl. iii. (1864).

Rostral about twice as broad as deep, feebly prominent, not keeled; only the nasals and internasals enlarged, the rest of the head covered with small, obtusely keeled scales; 8 to 10 scales from eye to eye across the forehead; 10 to 15 scales round the eye, which is separated from the labials by one or two rows of scales; 12 to 14 upper labials. No mental groove. Scales tubercularly keeled, the keels very strong on the tail, in 40 to 49 rows. Ventrals 162-186; anal entire; subcaudals 17-24. Tail pointed. Yellowish or brownish grey above, with a zigzag band or series of dark brown black-edged spots along the back; lower parts uniform white.

Total length 600 millim.; tail 55.

India.

a. Yg. (V. 175; C. 18).	Sind.	Dr. Leith [P.].
b-c. ♀ (V. 173; C. 21) & yg. (V. 166; C. 19).	Gwalior.	C. Maries, Esq. [E.].
d. Yg. (V. 162; C. 19).	Deccan.	Col. Sykes [P.].
e. Hgr. (V. 170; C. 18).	Madras.	Dr. P. Russell.
f. ♀ (V. 169; C. 18).	Madras.	Sir W. Elliot [P.].
g. ♀ (V. 175; C. 17).	Madras.	T. C. Jerdon, Esq. [P.].
h-i. Yg. (V. 173, 166; C. 17, 17).	Madras.	J. E. Boileau, Esq. [P.].
k. ♀ (V. 186; C. 24).	Anamallays.	Col. Beddome [C.].
l. ♀ (V. 183; C. 20).	Sikkim, 4900 ft. [??].	Messrs. v. Schlagintweit [C.].
m. ♀ (V. 167; C. 22).	India.	
n. Ad., stffid.	India.	
o. Skull.	India.	J. Nimmo, Esq. [P.].

2. *Eryx thebaicus*.

*Geoffroy, Descr. Egypte, Rept.* p. 142, pl. vi. fig. 1 (1809).

*Eryx thebaicus*, *Reuss, Mus. Senckenb.* i. 1834, p. 134; *Dum. & Bibr.* vi. p. 468 (1844); *Schleg. Bijdr. tot de Dierk.* i. p. 2 (1848); *Gray, Cat.* p. 109 (1849); *Jan, Icon. Gén.* p. 73, l. 4, pl. i. fig. 2 (1864).

— *scutata*, *Gray, Zool. Misc.* p. 45 (1842).

? *Eryx jaculus*, var. *sennaariensis*, *Jan, l. c.* pl. ii. fig. 2.

*Gongylophis thebaicus*, *Bouleng. Ann. & Mag. N. H.* (6) ix. 1892, p. 76.

Rostral large and broad, with angular horizontal edge; only the nasals and internasals enlarged, the head covered with very small smooth scales; 11 to 13 scales from eye to eye across the forehead; 12 to 15 scales round the eye, which is separated from the labials by two or three rows of scales; 12 to 14 upper labials. Mental groove usually absent (present in spec. *f*). Scales smooth or more or less distinctly keeled anteriorly, the keels strong on the posterior part of the body and on the tail, in 47 to 53 rows. Ventrals 171–197; anal entire; subcaudals 19–28. Tail pointed. Yellowish or greyish above, with large, irregular, dark brown or blackish spots separated by narrow interspaces; lower parts uniform white.

Total length 620 millim.; tail 50.

Upper Egypt and East Africa.

- |   |                              |  |
|---|------------------------------|--|
| a. ♀ (V. 187; C. 25).   | Egypt.                       | Sir J. Wilkinson [P.]. (Type of <i>E. scutata</i> .) |
| b-e. ♀ (V. 185; C. 22) & yg. (V. 179, 182, 175; C. 25, 23, 23). | Luxor.                       | Dr. J. Anderson [P.].                                |
| f. ♀ (V. 188; C. 21).   | Tel-el-Amarnah, Upper Egypt. | Dr. J. Anderson & Prof. W. M. Flinders Petrie [P.].  |
| g-i. ♀ (V. 192; C. 25) & yg. (V. 188, 187; C. 23, 28).          | Suakin.                      | Dr. Bimbashi Penton & Dr. J. Anderson [P.].          |
| k. Hgr. (V. 182; C. 23).  | Taita, E. Africa.            | Mr. Wray [C.].                                       |

3. *Eryx jaculus*.

*Geoffroy, Descr. Egypte, Rept.* p. 142, pl. vi. fig. 2 (1809).

*Anguis jaculus*, *Linn. Mus. Ad. Frid.* ii. p. 48 (1764), and *S. N. i.* p. 391 (1766).

— *colubrina*, *Linn. S. N. i.* p. 390.

— *cerastes*, *Linn. l. c.* p. 391.

— *miliaris*, *Pallas, Reise*, ii. p. 718 (1773), and *Zoogr. Ross.-As.* iii. p. 54 (1811).

*Boa turcica*, *Olivier, Voy. Emp. Othom., Atlas*, i. p. vi, pl. xvi. fig. 2 (1801).

*Eryx cerastes*, *Daud. Rept.* vii. p. 254 (1803).

— *jaculus*, *Daud. t. c.* p. 257; *Bibr. & Bory de St. Vinc. Expéd. Sc. Morée, Zool., Rept.* p. 73 (1833); *Reuss, Mus. Senckenb.* i. 1834, p. 133; *Dum. & Bibr.* vi. p. 463 (1844); *Schleg. Bijdr. tot de Dierk.* i. p. 2 (1848); *Gray, Cat.* p. 109 (1849); *Strauch, Erp. Alg.* p. 51 (1862); *Jan, Icon. Gén.* p. 72, l. 4, pl. ii. fig. 1 (1864); *Strauch, Schl. Russ. R.* p. 29 (1873); *Schreib. Herp. Eur.* p. 312 (1875); *Blanf. Zool. E. Pers.* p. 401 (1876); *Boettg. Ber. Senckenb. Ges.*

1879-80, p. 166; *Bedriaga, Bull. Soc. Nat. Mosc.* 1881, p. 131; *Boetty. in Radde, Faun. Casp.-Geb.* p. 73 (1886); *Bouleng. Bull. Soc. Zool. Fr.* 1887, p. 532; *Boetty. Zool. Jahrb.* iii. 1888, p. 938; *Bouleng. Tr. Zool. Soc.* xiii. 1891, p. 143, and *Proc. Zool. Soc.* 1891, p. 631.

*Eryx colubrinus, Daud. t. c.* p. 261.

— *turcicus, Daud. t. c.* p. 267, pl. lxxxv. fig. 2; *Eichw. Zool. Spec.* iii. p. 176 (1831), and *Faun. Casp.-Cauc.* p. 99, pl. xvii. figs. 1-3 (1841).

*Anguis helluo, Pallas, Zoogr. Ross.-As.* iii. p. 54.

*Tortrix miliaris, Merr. Tent.* p. 82 (1820).

— *jaculus, Merr. l. c.* p. 83.

— *colubrina, Merr. l. c.*

*Boa tatarica, Lichtenst. Verz. Doubl.* p. 104 (1823), and *Eversm. Reise Orenb. n. Buch.* p. 146 (1823).

*Eryx familiaris, Eichw. Zool. Spec.* p. 176.

— *miliaris, Eichw. l. c.*

*Tortrix eryx, Schleg. Phys. Serp.* ii. p. 14, pl. i. figs. 11-13 (1837).

*Eryx jaculus, var. teherana, Jan, l. c.* p. 72; *De Filippi, Viagg. Pers.* p. 355 (1865).

Rostral large and broad, with angular horizontal edge; one or two pairs of small shields behind the rostral, five to nine scales from eye to eye across the forehead; seven to fourteen scales round the eye, which is separated from the labials by one or two rows of scales; ten to fourteen upper labials. A mental groove. Scales smooth, feebly keeled on the posterior part of the body and on the tail, in 40 to 50 rows. Ventrals narrow, 165-200; anal small; subcaudals 15-34. Tail obtusely conical. Pale greyish, reddish, or yellowish brown above, with dark brown or blackish transverse blotches or alternating spots; or brown, with paler spots; a dark streak from the eye to the angle of the mouth; belly white, uniform or with blackish dots; a more or less distinct dark streak along each side of the tail.

Total length 510 millim.; tail 45.

Ionian Islands, Greece, Turkey (?), S.W. and Central Asia, North Africa.

A. 5 to 7 scales between the eyes, 2 or 3 between the nasals and the eye, 8 to 11 round the eye; 9 to 11 upper labials.

a. ♂ (V. 165; C. 29).	Corfu.	Dr. Bengo [P.].
b. Hgr. (V. 183; C. 20).	Greece.	Capt. Ince [P.].
c-f, g-i. ♂ (V. 168; C. 34); ♀ (V. 175; C. 26); hgr. (V. 177, 172, 170, 172; C. 21, 32, 24, 22); & yg. (V. 174, 172; C. 33, 22).	Xanthus.	Sir C. Fellows [P.].
k. ♀ (V. 173; C. 24).	Xanthus.	Haslar Hospital.
l. ♀ (V. 174; C. 19).	Palestine.	Canon Tristram [P.].
m. ♀ (V. 189; C. 19).	Egypt.	Sir J. Wilkinson [P.].
n. Yg. (V. 188; C. 21).	Mehalla-el-Kobra, Delta.	Dr. J. Anderson & G. H. Kent, Esq. [P.].
o-p. ♂ (V. 193; C. ?) & ♀ (V. 198; C. 18).	Near Cairo.	Dr. J. Anderson [P.].

- g. Hgr. (V. 187; C. 34). Between Shiraz and W. T. Blanford, Esq.  
Karman, Persia. [E.]
- r. ♀ (V. 165; C. 27). Ai Dara, W. slope of M. C. Eylandt [C.]  
Copet Dag, Trans-  
caspia.
- B. 7 to 9 scales between the eyes, 4 or 5 between the nasals and  
the eye, 10 to 14 round the eye; 10 to 14 upper labials.
- s. Hgr. (V. 185; C. 23). Ashkabad. Dr. Radde [C.]
- t. Hgr. (V. 179; C. 24). Ashkabad. M. C. Eylandt [C.]
- u. ♀ (V. 180; C. 27). Ashkabad. Warsaw Mus. [E.]
- v. Yg. (V. 188; C. 21). Puli Hatun, Trans- M. C. Eylandt [C.]  
caspia.
- w-y. ♂ (V. 183; C. 21), Ilisk, E. Turkestan. Rev. H. Lansdell  
♀ (V. 185; C. 20), & [C.]  
yg. (V. 172; C. 20).
- z. ♀ (V. 179; C. 22). Krasnowodsk. St. Petersburg Mus.  
[E.]
- a. ♀ (V. 184; C. 19). Turkestan. M. Severzow [C.]
- β. ♀ (V. 189; C. 25). Robat-i-turk. Dr. J. Aitchison [C.]  
Afghan Boundary Commission.
- γ-δ. ♀ (V. 200; C. 32), Bala-Morghab. Dr. J. Aitchison [C.]  
& yg. (V. 182; C. 33). Afghan Boundary Commission.

4. *Eryx johnii*.

*Boa johnii*, Russell, *Ind. Serp.* ii. pl. xvi. & pl. xvii. fig. 1 (1801).

— *anguiformis*, Schneid. *Hist. Amph.* ii. p. 269 (1801), and  
*Denkschr. Akad. Münch.* vii. 1821, p. 119, pl. viii.

*Clothonia anguiformis*, Daud. *Rept.* vii. p. 285 (1803).

*Eryx anguiformis*, Merr. *Tent.* p. 85 (1820).

*Tortrix eryx*, var. *indicus*, Schleg. *Phys. Serp.* ii. p. 17 (1837).

*Clothonia johnii*, Gray, *Zool. Misc.* p. 45 (1842), and *Cat.* p. 110  
(1849).

*Eryx johnii*, Dum. & Bibr. vi. p. 458 (1844); Schleg. *Bijdr. tot de  
Dierk.* i. p. 2 (1848); Günth. *Rept. Brit. Ind.* p. 334 (1864); Jan,  
*Icon. Gén.* p. 71, l. 4, pl. i. fig. 1 (1864); Stoliczka, *Proc. As. Soc.  
Beng.* 1872, p. 84; Theob. *Cat. Rept. Brit. Ind.* p. 207 (1876);  
Murray, *Zool. Sind.* p. 385 (1884); Bouleng. *Faun. Ind., Rept.*  
p. 248 (1890).

— *maculatus*, Hallow. *Proc. Ac. Philad.* 1849, p. 184.

Rostral large and broad, with angular horizontal edge; two pairs  
of small shields behind the rostral; six to nine scales from eye to  
eye across the forehead; ten or eleven scales round the eye, which  
is separated from the labials by one or two rows of scales; ten to  
twelve upper labials. A mental groove. Scales slightly keeled, in  
54 to 65 rows. Ventrals narrow, 192-210; anal small; sub-  
caudals 25 to 36. Tail very obtuse, rounded at the end. Sandy  
grey, reddish, or pale brown above, uniform or with more or less  
distinct brown or blackish transverse bands; these bands usually  
distinct on the tail; belly brown or spotted with blackish; young  
often pale coral-red.

Total length 1000 millim.; tail 80.

Plains of North-western, Central, and Southern India.



a. ♀ (V. 194; C. 28).	Kurracheo.	Kurrachee Mus. [E.].
b. Hgr. (V. 210; C. 32).	Belgaum.	Dr. Leith [P.].
c. ♂ (V. 197; C. 29).	Malabar.	
d, e. ♂ (V. 207; C. 33), & hgr. (V. 196; C. 36).	Madras.	T. C. Jerdon, Esq. [P.].
f. ♀ (V. 195; C. 26).	Sikkim, 9800 feet [??].	Messrs. v. Schlagintweit [C.].
g. ♀ (V. 203; C. 27).	India.	Gen. Hardwicke [P.].
h. ♀, skel.	India.	

### 5. *Eryx elegans*. (PLATE V. fig. 1.)

*Cusoria elegans*, Gray, *Cat.* p. 107 (1849).

*Cursoria elegans*, Günth. *Rept. Brit. Ind.* p. 333 (1864).

*Eryx elegans*, Blanford, *Zool. E. Pers.* p. 402 (1876).

Agrees in every respect with *E. jaculus*, except that the scales are larger, in 36 rows in the middle of the body. Seven scales across the forehead, from eye to eye, three between the nasals and the eye, nine round the eye; ten upper labials. Ventrals 184; subcaudals 24. Pale olive above, with a dorsal series of large and a lateral series of smaller brown, black-edged spots; lower parts whitish, spotted with black.

Total length 400 millim.; tail 40.

Afghanistan.

a. ♀ (V. 184; C. 24).	Afghanistan.	East India Company [P.]. (Type.)
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### 6. *Eryx muelleri*. (PLATE V. fig. 2.)

*Eryx jaculus*, var., F. Müller, *Verh. nat. Ges. Basel*, vi. 1878, p. 650.

*Gongylophis muelleri*, Boulenger, *Ann. & Mag. N. H.* (6) ix. 1892, p. 74.

Rostral large and broad, with angular horizontal edge; upper surface of snout and crown with small smooth shields, the largest of which is an azygous shield behind and wedged in between the internasals, which form a short suture behind the rostral; five shields from eye to eye across the forehead; nine or ten scales round the eye, which is separated from the labials by a single series of scales; nine upper labials. No mental groove. Scales perfectly smooth, in 41 to 45 rows. Ventrals 181-187; anal small, entire; subcaudals 16-19. Tail pointed, ending in a curved, claw-like, horny scute. Cream-colour, above with a dorsal series of large dark brown blotches, some of which alternate and are confluent into a zigzag band; a lateral series of smaller dark brown spots, alternating with the dorsals.

Total length 370 millim.; tail 30.

Nubia.

a. ♂ (V. 181; C. 19).	Sennar.	Sr. Marno [C.]; Basle Museum [E.]. (Type.)
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7. *Eryx jayakari*. (PLATE V. fig. 3.)

*Eryx jayakari*, *Bouleg. Ann. & Mag. N. H.* (6) ii. 1888, p. 508.

Eyes extremely small and entirely on the upper surface of the head. Rostral large and broad, with angular horizontal edge; the rostral, the internasals, and a small shield meet with their angles, the sutures forming an X; four scales from eye to eye across the forehead; nine or ten scales round the eye, which is separated from the labials by one large scale; eleven upper labials. A mental groove. Scales smooth, in 39 rows. Ventrals narrow, 175; anal small; subcaudals 20. Tail pointed, ending in a curved, claw-like, horny scute similar to the anal spurs. Greyish brown above, with whitish spots and numerous, rather irregular, dark brown cross bands; head dotted with dark brown; lower parts white.

Total length 400 millim.; tail 25.

Arabia.

a. ♀ (V. 175; C. 20). Muscat. A. S. G. Jayakar, Esq. [P.]. (Type.)

## 19. LICHANURA.

*Lichanura*, *Cope, Proc. Ac. Philad.* 1861, p. 304; *Jan, Icon. Gén. Ophid.* p. 69 (1865); *Bocourt, Miss. Sc. Mex., Rept.* p. 513 (1882); *Cope, Am. Nat.* 1886, p. 293, and *Proc. U.S. Nat. Mus.* xiv. 1892, p. 590.

Head not distinct from neck, covered with scales; rostral moderate; nostril between two nasals. Eye small, with vertical pupil. Body cylindrical; scales small, smooth. Tail short, thick, obtuse at the end, but slightly prehensile; subcaudals single.

Western North America.

1. *Lichanura trivirgata*.

*Lichanura trivirgata*, *Cope, Proc. Ac. Philad.* 1861, p. 304; *Jan, Icon. Gén.* p. 70 (1865); *Bocourt, Miss. Sc. Mex., Rept.* p. 514 (1882); *Stejneger, Proc. U.S. Nat. Mus.* xii. 1889, pp. 97, 98, fig.

— *roseofusca*, *Cope, Proc. Ac. Philad.* 1868, p. 2; *Stejneger, l. c.* p. 98; *Cope, Proc. U.S. Nat. Mus.* xiv. 1892, p. 591.

— *myriolepis*, *Cope, l. c.*; *Stejneger, l. c.*

*Charina trivirgata*, *Garm. N. Am. Rept.* p. 8 (1883).

*Lichanura orcutti*, *Stejneger, l. c.* p. 96, fig.

— *simplex*, *Stejneger, l. c.* p. 97, fig.

Snout prominent. Rostral deeper than broad; anterior nasal large, in contact with its fellow behind the rostral; a ring of seven to ten scales round the eye; 13 to 15 upper labials. Scales in 33 to 45 rows. Ventrals 218–232; anal entire; subcaudals 39–49. Yellowish, brown, or grey above, with or without three dark brown longitudinal bands; belly yellowish or pinkish, dotted or mottled irregularly with brown.

Total length 870 millim.; tail 110.

California and Lower California.

## 20. CHARINA.

- Charina, *Gray, Cat. Sn.* p. 113 (1849); *Cope, Proc. Ac. Philad.* 1861, p. 305; *Bocourt, Miss. Sc. Mex., Rept.* p. 511 (1882); *Cope, Am. Nat.* 1886, p. 293; *Stejneger, Proc. U.S. Nat. Mus.* xiii. 1890, p. 177; *Cope, Proc. U.S. Nat. Mus.* xiv. 1892, p. 592.  
 Wenona, *Baird & Gir. Proc. Ac. Philad.* 1852, p. 176, and *Cat. N. Am. Rept.* p. 139 (1853); *Jan, Icon. Gén. Ophid.* p. 68 (1865); *Bocourt, l. c.* p. 512.  
 Pseudoeryx, *Jan, Arch. f. Nat.* 1862, p. 242, and *Icon. Gén.* p. 66.

Anterior maxillary and mandibular teeth longest, gradually decreasing in size. Head not distinct from neck, covered with shields; rostral large; nostril between two nasals. Eye very small, with vertical pupil. Body cylindrical; scales small, smooth. Tail short, thick, not prehensile, rounded at the end; subcaudals single.

Western North America.

1. *Charina bottæ.*

- Tortrix bottæ, Blainv. Nouv. Ann. Mus.* iv. 1835, p. 289, pl. xxvi. fig. 1.  
*Charina bottæ, Gray, Cat.* p. 113 (1849); *Bocourt, Miss. Sc. Mex., Rept.* p. 511 (1882); *Garm. N. Am. Rept.* p. 7 (1883); *Stejneger, Proc. U.S. Nat. Mus.* xiii. 1890, p. 181; *Cope, Proc. U.S. Nat. Mus.* xiv. 1892, p. 592.  
*Wenona plumbea, Baird & Gir. Proc. Ac. Philad.* 1852, p. 176, and *Cat. N. Am. Rept.* p. 139 (1853); *Girard, U.S. Explor. Exped., Herp.* p. 112, pl. vii. figs. 1-7 (1858); *Jan, Icon. Gén.* p. 69, l. 3, pl. ii. fig. 2 (1864); *Bocourt, l. c.* p. 512, pl. xxx. fig. 7.  
 — *isabella, Baird & Gir. U. c. c.* pp. 176, 140; *Girard, l. c.* p. 113, pl. vii. figs. 8-14.  
*Pseudoeryx bottæ, Jan, Arch. f. Nat.* 1862, p. 246, and *Icon. Gén.* p. 67, l. 3, pl. ii. fig. 1.  
*Charina plumbea, Cope, Proc. Ac. Philad.* 1861, p. 305, and 1883, p. 21; *Stejneger, l. c.*

Snout rounded and prominent. Rostral large, as deep as broad or a little broader than deep, the portion visible from above at least two thirds its distance from the frontal; two or three pairs of shields between the rostral and the frontal; a small azygous præfrontal sometimes present; nostril between two nasals, the anterior of which is usually fused with the internasal; frontal as broad as deep or broader than deep, followed by a short, single or divided parietal; loreal present or fused with the præfrontals; one or two præoculars, the upper in contact with the frontal and not much smaller than the supraocular; two or three postoculars; eye in contact with one, two, or three labials, or separated from the labials by a series of suboculars; eight to eleven upper labials. Scales in 39 to 49 rows. Ventrals 192-211; anal entire; subcaudals 20-37. Yellowish, brown, or dark grey above, without any spots or markings; yellow beneath.

Total length 550 millim.; tail 50.

United States west of the Rocky Mountains; Lower California; North-western Mexico.

A. Anterior nasal, internasal, and anterior præfrontal distinct; no azygous præfrontal; loreal distinct; one or two labials in contact with the eye.

a. ♀ (Sc. 43; V. 202; California. Smithsonian Institution  
C. ?). [P.]

B. Anterior nasal fused with internasal; no azygous præfrontal; loreal distinct; eye separated from labials by suboculars.

b. ♀ (Sc. 45; V. 197; California. Zoological Society.  
C. 35).

c. ♀ (Sc. 45; V. 198; Yaquina Valley, Coast H. N. Moseley, Esq.  
C. 20). Ranges, West Oregon. [P.]

C. Anterior nasal, internasal, and anterior præfrontal fused; a small shield between the four præfrontals; loreal distinct; two labials entering the eye.

d. Hgr. ♂ (Sc. 45; Pacific Coast of the United States.  
V. 207; C. 37).

## 2. *Charina brachyops*.

*Charina brachyops*, Cope, *Proc. U.S. Nat. Mus.* xi. 1888, p. 88, pl. xxxvi. fig. 2; Stejneger, *Proc. U.S. Nat. Mus.* xiii. 1890, p. 181.

This species is based on a single specimen which, perhaps, represents merely an individual variation of *C. bottæ*, differing in having the posterior præfrontal entering the eye and the posterior nasal in contact with the præocular.

Point Reyes, California.

## Fam. 4. ILYSIIDÆ.

Anguiformes, part., Oppel, *Ordn. Rept.* p. 49, 1811.

Ilysioides, Fitzinger, *Neue Classif. Rept.* p. 26, 1826.

Imbricatae, part., Bois, *Isis*, 1827, p. 510.

Angiostomata Tortricina, J. Müller, *Zeitschr. f. Physiol.* iv. p. 270, 1832.

Boideæ, part., Gray, *Zool. Miscell.* p. 41, 1842.

Azémiphides Tortriciens, Duméril & Bibron, *Erp. Gén.* vi. p. 567, 1844.

Boideæ, part., Gray, *Cat. Sn.* p. 82, 1849.

Aglyphodontes Holodontiens, part., Aprotérodontiens, part., Duméril, *Mém. Ac. Sc.* xxiii. pp. 424 & 428, 1853.

Tortricidæ, part., Jan, *Elenco sist. Ofid.* p. 18, 1863.

Tortricidæ, Cope, *Proc. Ac. Philad.* 1864, p. 230.

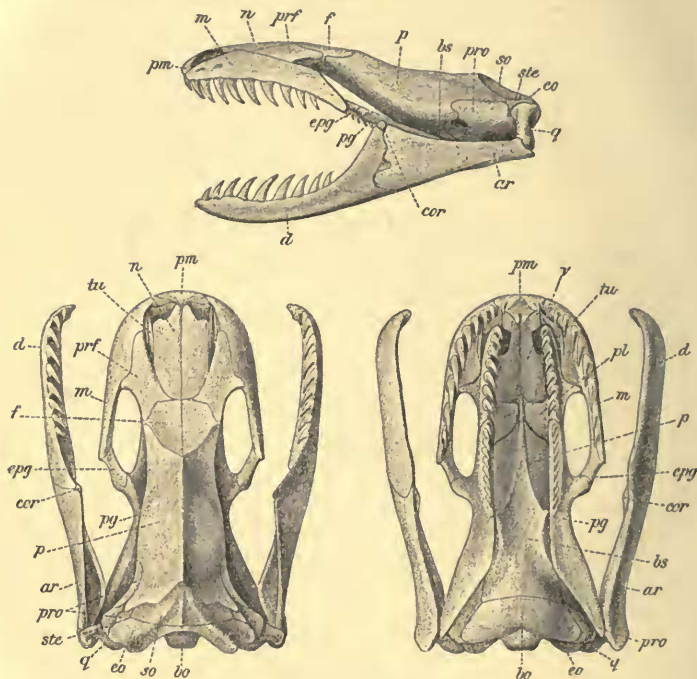
Tortricidæ, Günth. *Rept. Brit. Ind.* p. 178, 1864.

Tortricidæ, Cope, *Proc. Amer. Philos. Soc.* xxiii. p. 482, 1886.

Ilysiidæ, Boulenger, *Faun. Ind.*, *Rept.* p. 249, 1890.

Cranial bones more or less solidly united; transpalatine present; pterygoid extending to quadrate; supratemporal very small and wedged in between the adjacent bones; quadrate very short; præ-frontal in contact with nasal. Mandible with coronoid bone. Teeth in jaws and on palate. Vestiges of pelvis as in the *Boidæ*, and terminating in a claw-like spur usually distinguishable on each side of the vent.

Fig. 8.

Skull of *Ilysia scytale*.

This family forms a passage from the *Boidæ* to the *Uropeltidæ*, agreeing with the latter in the physiognomy and scaling, with the former in the presence of vestiges of pelvis, whilst the skull is exactly intermediate.

Ceylon and South-eastern Asia; Tropical South America.

#### Synopsis of the Genera.

Præmaxillary teeth; eye in an ocular shield; no mental groove.

1. *Ilysia*, p. 133.

No præmaxillary teeth; eye distinct from the surrounding shields; no mental groove . . . . . 2. *Anomalochilus*, p. 134.

No præmaxillary teeth; eye distinct from the surrounding shields; a mental groove . . . . . 3. *Cylindrophis*, p. 134.



## 1. ILYSIA.

- Tortrix (*non* Linn.), part., *Oppel, Ordn. Rept.* p. 55 (1811); *Schleg. Phys. Serp.* ii. p. 1 (1837).  
 Anilius, part., *Oken, Lehrb. Naturg.* iii. p. 283 (1816).  
 Ilysia, part., *Hemprich, Grundr. d. Naturg.* (1820)\*; *Fitzing. N. Class. Rept.* p. 26 (1826).  
 Torquatrix, part., *Haworth, Phil. Mag.* lxxv. 1825, p. 372.  
 Torquatrix, *Gray, Ann. Phil.* x. 1825, p. 209.  
 Ilysia, *Wagler, Icon. Amph.* (1828), and *Syst. Amph.* p. 193 (1830).  
 Tortrix, *Dum. & Bibr. Erp. Gén.* vi. p. 584 (1844); *Gray, Cat. Sn.* p. 113 (1849); *Jan, Icon. Gén. Ophid.* p. 54 (1865).

Teeth moderate, subequal, 9 or 10 in each maxillary; small teeth in the præmaxillary. Head very small, not distinct from neck; eye extremely small, with round pupil, in an ocular shield; large symmetrical shields on the head; nostril in a single nasal, which forms a suture with its fellow behind the rostral; no loreal, præocular, or postocular; no mental groove. Body cylindrical; scales smooth, in 19 or 21 rows; ventrals feebly enlarged. Tail extremely short and blunt.

South America.

## 1. Ilysia scytale.

- Anguis scytale, *Linn. Mus. Ad. Frid.* p. 21, pl. vi. fig. 2 (1754), and *S. N. i.* p. 391 (1766); *Laur. Syn. Rept.* p. 70 (1768); *Daud. Rept.* vii. p. 302, pl. lxxxvii. fig. 1 (1803).  
 — annulata, *Laur. l. c.* p. 69.  
 — fasciata, *Laur. l. c.* p. 70; *Daud. l. c.* p. 306.  
 — corallina, *Laur. l. c.* p. 71.  
 — cærulea, *Laur. l. c.*  
 — atra, *Laur. l. c.*  
 Tortrix scytale, *Oppel, Ordn. Rept.* p. 56 (1811); *Schleg. Phys. Serp.* ii. p. 5, pl. i. figs. 4 & 5 (1837), and *Abbild.* p. 110, pl. xxxiii. figs. 1-4 (1844); *Dum. & Bibr. vi.* p. 585 (1844); *Gray, Cat. Sn.* p. 114 (1849); *Jan, Icon. Gén.* p. 55, pl. iii. (1865).  
 — coralinus, *Oppel, l. c.*  
 Ilysia scytale, *Lichtenst. Verz. Doubl. Mus. Berl.* p. 104 (1823); *Wagler, Icon. Amph.* pl. v. fig. 2 (1828).  
 Torquatrix scytale, *Gray, Ann. Phil.* x. 1825, p. 209.

A pair of very large præfrontals; frontal rather small, longer than broad, usually in contact with a nearly equally large occipital; supraocular and parietal subequal in size, and scarcely larger than the scales on the back of the head; five or six upper labials, third and fourth in contact with the ocular. Scales in 19 or 21 rows. Ventrals 210-244; anal entire; subcaudals 9-14. Red (yellowish in spirit), with more or less complete black annuli; the dorsal scales sometimes edged with brown.

Total length 830 millim.

Guianas and Upper Amazon.

\* The author has not been able to refer to this work.



a. Ad. (V. 218; C. 11).	Surinam.	
b-c. Ad. (V. 210, 211; C. 12, 12).	Berbice.	
d. Ad. (V. 213; C. 12).	Berbice.	Lady Essex [P.].
e. Ad. (V. 227; C. 12).	Demerara.	R. Latham, Esq. [P.].
f. Ad. (V. 235; C. 11).	Demerara.	Lieut. Friend [P.].
g. Ad. (V. 226; C. 12).	Demerara.	Dr. Hancock [P.].
h. Ad. (V. 225; C. 11).	Demerara.	
i. Ad. (V. 217; C. 11).	British Guiana.	
k. Hgr. (V. 238; C. 11).	Upper Amazon.	Mr. Bartlett [C.].
l. Ad. (V. 244; C. 9).	Moyobamba, N.E. Peru.	Mr. A. H. Roff [C.].
m. Skel.	S. America.	Haslar Hospital.
n. Skull.	S. America.	

## 2. ANOMALOCHILUS.

*Anomalochilus*, v. *Lidth de Jeude*, in *M. Weber*, *Zool. Ergebn.* ii. p. 180 (1890).

No præmaxillary teeth\*. Head small, not distinct from neck; eye very small, distinct from the surrounding shields; head with large symmetrical shields; nostril in a single nasal, which forms a suture with its fellow behind the rostril; no loreal or præocular; a postocular; no mental groove. Body cylindrical; scales smooth, in 21 rows; ventrals very small, scarcely enlarged. Tail extremely short and blunt.

Sumatra.

### 1. *Anomalochilus weberi*.

*Anomalochilus weberi*, v. *Lidth de Jeude*, *l. c.* p. 181, pl. xv. figs. 1-3.

Frontal nearly twice as large as the supraocular, quadrangular; no enlarged parietals; four upper labials, third largest and in contact with the eye. Scales in 21 rows. Ventrals scarcely larger than the neighbouring scales, 244; anal divided; subcaudals 8. Brown, each scale with a lighter edge; a light spot on each præ-frontal and on the frontal; a series of round light spots on each side of the back, in pairs or alternating; an interrupted whitish line along the middle of the side; beneath with irregular light spots arranged in pairs and sometimes confluent.

Kaju Tanam, Sumatra.

## 3. CYLINDROPHIS.

Tortrix (*non* Linn.), part., *Oppel*, *Ordn. Rept.* p. 55 (1811); *Schleg. Phys. Serp.* ii. p. 1 (1837).  
*Anilius*, part., *Oken*, *Lehrb. Naturg.* iii. p. 283 (1816).  
*Ilysia*, part., *Hemprich*, *Grundr. Naturg.* (1820); *Fitz. N. Class. Rept.* p. 26 (1826).

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\* Dr. van Lidth de Jeude kindly informs me that he has been unable to detect præmaxillary teeth in the type specimen.

Torquatrix, part., *Haworth, Phil. Mag.* 1825, p. 372.

Cylindrophis, *Wagler, Icon. Amph.* (1828), and *Syst. Amph.* p. 195 (1830); *Dum. & Bibr. Exp. Gén.* vi. p. 590 (1844); *Gray, Cat. Sn.* p. 111 (1849); *Günth. Rept. Brit. Ind.* p. 178 (1864); *Jan, Icon. Gén. Ophid.* p. 55 (1865); *Bouleng. Faun. Ind., Rept.* p. 249 (1890).

Teeth moderate, subequal, 10 to 12 in each maxillary; none in præmaxillary. Head small, not distinct from neck; eyes very small, with round or vertically subelliptic pupil, distinct from the neighbouring shields; head with large symmetrical shields; nostril in a single nasal, which forms a suture with its fellow behind the rostral; no loreal or præocular; a small postocular; a mental groove. Body cylindrical; scales smooth, in 19 or 21 rows; ventrals feebly enlarged. Tail extremely short and blunt.

Ceylon and South-eastern Asia east of the Bay of Bengal.

### *Synopsis of the Species.*

I. Diameter of the eye about half its distance from the nostril; interocular width more than the length of the snout.

1. *rufus*, p. 135.

II. Diameter of the eye one third to one fourth its distance from the nostril; interocular width equal to the length of the snout.

Parietals at least as large as the frontal . . . . 2. *maculatus*, p. 136.

Parietals smaller than the frontal . . . . . 3. *lineatus*, p. 137.

### 1. *Cylindrophis rufus*.

*Anguis rufa*, *Laur. Syn. Rept.* p. 71 (1768).

— *scytale*, *Russell, Ind. Serp.* ii. pls. xxvii. & xxviii. (1801).

— *corallina*, *Shaw, Zool.* iii. p. 582, pl. cxxxi. (1802).

*Eryx rufus*, *Daud. Rept.* vii. p. 263 (1803).

*Tortrix rufa*, *Merr. Tent.* p. 84 (1820); *Schleg. Phys. Serp.* ii. p. 9, pl. i. figs. 1-3 (1837), and *Abbild.* p. 111, pl. xxxiii. figs. 11-17 (1844).

*Scytale scheuchzeri*, *Merr. l. c.* p. 91.

*Ilysia rufa*, *Lichtenst. Verz. Doubl.* p. 104 (1823).

*Cylindrophis resplendens*, *Wagl. Icon. Amph.* pl. v. fig. 1 (1828).

— *melanotus*, *Wagl. l. c. (annot.)*; *Dum. & Bibr.* vi. p. 592 (1844); *Gray, Cat.* p. 111 (1849).

— *rufa*, *Gray, Zool. Misc.* p. 40 (1842); *Dum. & Bibr.* vi. p. 595 (1844); *Cantor, Cat. Mal. Rept.* p. 53 (1847); *Gray, Cat.* p. 111; *Günth. Rept. Brit. Ind.* p. 179 (1864); *Jan, Icon. Gén.* p. 56, l. 9, pl. iv. figs. 1 & 2 (1865); *Theob. Cat. Rept. Brit. Ind.* p. 127 (1876); *Anders. Zool. Res. Funnan*, p. 808 (1879); *Bouleng. Faun. Ind., Rept.* p. 250, fig. (1890).

Diameter of the eye about half its distance from the nostril; the distance between the eyes greater than the length of the snout; frontal at least as large as the supraocular, larger than the parietals, at least as long as its distance from the rostral; six upper labials, third and fourth entering the eye. Scales in 19 or 21 rows. Ventrals not twice as large as the contiguous scales, 186-245; anal

divided; subcaudals 5-10. Brown or black above, with or without alternating light cross bands; belly white with transverse black bands or spots, or black with transverse white bands; lower surface of tail bright vermilion during life.

Total length 770 millim.

Burma and Cochinchina to the Malay Peninsula and Archipelago.

a. Hgr. (V. 201; C. 6).	Pyimmana, Upper Burma.	E. W. Oates, Esq. [P.].
b. ♀, with young (V. 208; C. 7).	Pegu.	W. Theobald, Esq. [C.].
c. Yg. (V. 185; C. 5).	Siam.	Sir R. Schomburgk [P.].
d. ♀ (V. 196; C. 6).	Camboja.	M. Mouhot [C.].
e. ♀ (V. 208; C. 5).	Singapore.	Dr. Cantor.
f. Hgr. (V. 211; C. 5).	Singapore.	Dr. Denuys [P.].
g. ♀ (V. 197; C. 7).	Singapore.	
h, i-k. ♀ (V. 187, 193, 186; C. 6, 6, 5).	Pinang.	Gen. Hardwicke [P.].
l. ♀ (V. 221; C. 7).	District of Deli, Sumatra.	Mr. Iversen [C.].
m. ♀ (V. 207; C. 6).	Borneo.	Sir J. Brooke [P.].
n. Hgr. (V. 200; C. 6).	Borneo.	A. R. Wallace, Esq. [C.].
o-p. ♀ (V. 205, 207; C. 7, 6).	Rejang River, Sarawak.	Brooke Low, Esq. [P.].
q-r. Yg. (V. 186, 190; C. 6, 7).	Java.	J. Bowring, Esq. [P.].
s, t. ♂ (V. 242; C. 9) & ♀ (V. 186; C. 6).	Celebes.	
u-y. ♂ (V. 237, 245, 241; C. 8, 9, 8) & ♀ (V. 212, 217; C. 7, 7).	Manado.	Dr. A. B. Meyer [C.].
z-a. ♂ (V. 240, 239; C. 9, 10).	N. Celebes.	Dr. A. B. Meyer [C.].
β. Skel.	Java.	R. Kirkpatrick, Esq. [P.].

## 2. *Cylindrophis maculatus*.

*Anguis maculata*, Linn. *Mus. Ad. Frid.* p. 21, pl. xxi. fig. 3 (1754),  
and *S. N.* i. p. 391 (1766); *Laur. Syn. Rept.* p. 72 (1768);  
*Russell, Ind. Serp.* ii. pl. xxix. (1801); *Daud. Rept.* vii. p. 319  
(1803).

— *decussata*, *Laur. l. c.*

*Tortrix maculatus*, *Oppel, Ordn. Rept.* p. 56 (1811); *Guér. Icon.  
R. A., Rept.* pl. xix. fig. 1 (1830); *Schleg. Phys. Serp.* ii. p. 12,  
pl. i. figs. 6 & 7 (1837).

*Ilysia maculata*, *Lichtenst. Verz. Doubl.* p. 104 (1823).

*Cylindrophis maculata*, *Gray, Zool. Misc.* p. 46 (1842); *Dum. &  
Bibr. vi.* p. 597 (1844); *Gray, Cat.* p. 112 (1849); *Günth. Rept.  
Brit. Ind.* p. 179 (1864); *Jan, Icon. Gén.* p. 56, l. 9, pl. iv. fig. 3  
(1865); *Bouleng. Faun. Ind., Rept.* p. 251 (1890).

Diameter of the eye one third to one fourth its distance from the  
nostril; the distance between the eyes equals the length of the

snout; frontal usually a little smaller than the supraocular or the parietal; six upper labials, third and fourth entering the eye. Scales in 19 or 21 rows. Ventrals not twice as large as the contiguous scales, 189-212; anal divided; subcaudals 4-6. Above, with black network enclosing two series of large reddish-brown spots along the back; lower parts white, variegated with black.

Total length 350 millim.

Ceylon.

a. ♀ (V. 212; C. 5).	Trincomalee.	Col. Yerbury [P.].
b. ♀ (V. 201; C. 5).	Ceylon.	Sir J. Banks [P.].
c. Hgr. (V. 189; C. 5).	Ceylon.	R. Templeton, Esq. [P.].
d. Hgr. (V. 192; C. 5).	Ceylon.	
e-f. ♀ (V. 198, 196; C. 6, 6).	— ?	Dr. P. Russell [P.].
g. ♀ (V. 198; C. 4).	— ?	Zoological Society.

### 3. *Cylindrophis lineatus*.

*Cylindrophis lineatus*, *Blunf. Proc. Zool. Soc.* 1881, p. 217, pl. xx.

Diameter of the eye about one fourth its distance from the nostril; the distance between the eyes equals the length of the snout; frontal about as large as the supraocular and a little larger than the parietals; six upper labials, third and fourth entering the eye. Scales in 21 rows. Ventrals nearly twice as large as the contiguous scales, 215; anal divided; subcaudals 9. Blackish brown above, with two white stripes; belly white, with alternating black cross bands; head and tail yellowish.

Total length 730 millim.

Singapore.

## Fam. 5. UROPELTIDÆ\*.

Typhlopoidea, part., *Fitzinger, Neue Class. Rept.* p. 25, 1826.

Uropeltacea, *J. Müller, Zeitschr. f. Physiol.* iv. p. 270, 1832.

Uropeltidæ, *Gray, Cat. Liz.* p. 140, 1845.

Upérolissiens, *Duméril, Mém. Ac. Sc.* xxiii. p. 443, 1853; *Duméril & Bibron, Erp. Gén.* vii. p. 144, 1854.

Uropeltidæ, *Jan, Elenco sist. Ofid.* p. 16, 1863.

Uropeltidæ, *Günther, Rept. Brit. Ind.* p. 182, 1864.

Uropeltidæ, *Cope, Proc. Ac. Philad.* 1864, p. 230.

Rhinophidæ, *Cope, Proc. Amer. Philos. Soc.* xxiii. p. 482, 1886.

Uropeltidæ, *Boulenger, Faun. Ind., Rept.* p. 251, 1890.

Cranial bones solidly united; transpalatine present; pterygoid not extending to quadrate or mandible; no supratemporal; quadrate

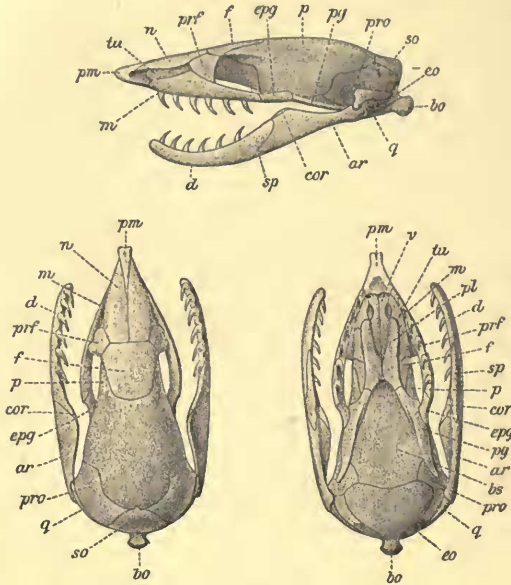
\* The following names in Jerdon's Catalogue of Indian Reptiles (*Journ. As. Soc. Beng.* xxii. 1854, p. 527) refer, in all probability, to Snakes of this family:—

*Cylindrophis curticeps*, *Cylindrophis macroscelis*, *Pilidion? montanum*, *Uropeltis affinis*, *Xenopeltis? trivirgatus*. All from the Nilgherries.

very small; præfrontals in contact with nasals. Mandible with coronoid bone. Both jaws toothed; teeth small and few.

Palate usually toothless; a few palatine teeth sometimes present in *Melanophidium* and *Platyplectrurus*.

Fig. 9.



Skull of *Silybura grandis*.

Head small and not distinct from neck; eye small or very small, with round pupil. Body cylindrical, rigid; tail very short.

Burrowing Snakes of small size, restricted to Ceylon and the mountains of Peninsular India, or to the heavy forests at the immediate foot of the mountains, as far north as 19°.

*Synopsis of the Genera.*

I. Eye in the ocular shield; fourth labial in contact with the parietal.

A. No mental groove.

1. No supraocular shield.

Tail obliquely truncated, ending in a large, rugose, circular or oval, flat shield..... 1. *Uropeltis*, p. 139.

Tail ending in a large convex rugose shield, which is neither truncated nor spinose at the end .... 2. *Rhinophis*, p. 140.



Terminal caudal scute small, square at the end or bicuspid, the points side by side . . . . . 3. *Silybura*, p. 144.

Tail compressed, the terminal scute with two superposed, single or bifid points . . . . . 4. *Pseudoplectrurus*, p. 160.

2. A supraocular shield . . . . . 5. *Plectrurus*, p. 160.

B. A mental groove . . . . . 6. *Melanophidium*, p. 163.

II. Eye distinct from the surrounding shields; a temporal shield separates the fourth labial from the parietal.

7. *Platyplectrurus*, p. 165.

### 1. UROPELTIS.

*Uropeltis*, part., *Cuv. R. A.* 2nd ed. ii. p. 76 (1829).

*Uropeltis*, Müller, *Zeitschr. f. Physiol.* iv. 1832, p. 252; *Gray, Cat. Liz.* p. 141 (1845); *Dum. & Bibr. Erp. Gén.* vii. p. 160 (1854); *Peters, Uropelt.* p. 19 (1861); *Günth. Rept. Brit. Ind.* p. 188 (1864); *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 9; *Bouleng. Faun. Ind., Rept.* p. 253 (1890).

Pseudo-Typhlops, part., *Schleg. Abbild.* p. 40 (1844).

Eye in the ocular shield; no supraocular, no temporal shields. No mental groove. Tail obliquely truncated, ending in a large, circular or oval, flat shield.

Ceylon.

#### 1. *Uropeltis grandis*.

*Uropeltis philippinus*, *Cuv. R. A.* 2nd ed. ii. p. 76 (1829); *Müll. Zeitschr. f. Physiol.* iv. 1832, p. 252, pl. xxii. fig. 2; *Eydoux & Gervais, in Guér. Mag. Zool.*, Cl. iii. pl. xiii. (1837), and *Voy. Favorite, v. Zool.* p. 66, pl. xxvi. (1839); *Gray, Cat. Liz.* p. 141 (1845); *Dum. & Bibr.* vii. p. 161, pl. lix. fig. 2 (1854); *Peters, Uropelt.* p. 20 (1861); *Jan, Icon. Gén.* p. 46, l. 9, pl. ii. fig. 1 (1865).

Pseudo-Typhlops *philippinus*, *Schleg. Abbild.* p. 44 (1844).

*Uropeltis grandis*, *Kelaart, Prodr. Faun. Zeyl.* ii. p. 15 (1853); *Gray, Proc. Zool. Soc.* 1858, p. 262; *Günth. Rept. Brit. Ind.* p. 188 (1864); *Theob. Cat. Rept. Brit. Ind.* p. 132 (1870); *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 9; *Bouleng. Faun. Ind., Rept.* p. 254, fig. (1890).

— *saffragamus*, *Kelaart, l. c.* p. 15.

— *pardalis*, *Kelaart, l. c.* p. 16; *Gray, Proc. Zool. Soc.* 1858, p. 263.

Snout acutely pointed; rostral convex, much produced posteriorly, nearly as long as the frontal; nasals forming a suture behind the rostral. Diameter of body about one twentieth of the total length. 19 scales round the middle of the body, 23 behind the head. Ventrals not twice as large as the contiguous scales, 129-147; sub-caudals 6-9. Caudal disk longer than the shielded part of the head. Dark brown or blackish above, with or without yellow spots; yellow beneath, with or without dark brown spots.

Total length 460 millim.

Ceylon (Central Provinces).

a. ♂ (V. 139; C. 6).	Kerinday, near Matura.	Dr. Kelaart. (Type of <i>U. grandis</i> .)
b. Hgr. (V. 129; C. 6).	Matura.	Dr. Kelaart. (Type of <i>U. pardalis</i> .)
c. ♀ (V. 142; C. 6).	Kandy.	Col. Yerbury [P.].
d. Hgr. (V. 147; C. 9).	Ceylon.	Sir A. Smith [P.].
e. Hgr. (V. 139; C. 6).	Ceylon.	Col. Beddome [C.].
f. ♂ (V. 142; C. 9).	Ceylon.	

## 2. RHINOPHIS.

Rhinophis, *Hemprich, Grundr. d. Naturg.* p. 119 (1820); *Müller, Zeitschr. f. Physiol.* iv. 1832, p. 248; *Gray, Cat. Liz.* p. 141 (1845); *Dum. & Bibr. Exp. Gén.* vii. p. 153 (1854); *Peters, Uropelt.* p. 9 (1861); *Günth. Rept. Brit. Ind.* p. 183 (1864); *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 5; *Bouleng. Faun. Ind., Rept.* p. 254 (1890).

Pseudo-Typhlops, part., *Schleg. Abbild.* p. 40 (1844).

Dapatnaya, *Kelaart, Prodr. Faun. Zeyl.* ii. p. 16 (1853).

Mytilia, part., *Gray, Proc. Zool. Soc.* 1858, p. 263.

Eye in the ocular shield; no supraocular, no temporal. No mental groove. Tail ending in a large convex rugose shield, which is neither truncated nor spinose at the end.

In all the species the nasals are separated by the rostral.

Ceylon and Southern India.

### *Synopsis of the Species.*

I. Caudal shield as long as or a little shorter than the shielded part of the head.

A. Rostral strongly keeled, half as long as the shielded part of the head; 17 or 19 scales round the middle of the body.

Diameter of the body 37 to 40 times in the total length; ventrals 217-223 . . . 1. *oxyrhinus*, p. 141.

Diameter of the body 47 to 49 times in the total length; ventrals 236-246 . . . 2. *punctatus*, p. 141.

B. Rostral about two fifths the length of the shielded part of the head; 17 scales round the middle of the body.

Ventrals 153-172 . . . . . 3. *planiceps*, p. 141.

Ventrals 190-204 . . . . . 4. *trevelyanus*, p. 142.

C. Rostral one third the length of the shielded part of the head.

15 scales round the middle of the body; ventrals 182-214 . . . . . 5. *sanguineus*, p. 143.

17 scales round the middle of the body; ventrals 146 . . . . . 6. *travancoricus*, p. 143.

II. Caudal shield much shorter than the shielded part of the head.

7. *blythii*, p. 144.

1. *Rhinophis oxyrhynchus*.

*Typhlops oxyrhynchus*, *Schneid. Hist. Amph.* ii. p. 341 (1801).  
*Rhinophis oxyrhynchus*, *Hempr. Grundr. Naturg.* p. 119 (1820);  
*Müll. Zeitschr. f. Physiol.* iv. 1832, p. 248; *Gray, Cat. Liz.* p. 141  
 (1845); *Dum. & Bibr.* vii. p. 156 (1854); *Peters, Uropelt.* p. 9,  
 pl. ii. fig. 1 (1861); *Günth. Rept. Brit. Ind.* p. 184 (1864); *Theob.*  
*Cat. Rept. Brit. Ind.* p. 128 (1876); *Beddome, Ann. & Mag.*  
*N. H.* (5) xvii. 1886, p. 5; *Bouleng. Faun. Ind., Rept.* p. 255  
 (1890).

*Dapatnaya lankadivana*, *Kelaart, Prodr. Faun. Zeyl.* ii. p. 16 (1853).  
*Mytilia unimaculata*, *Gray, Proc. Zool. Soc.* 1858, p. 264, fig.

Snout acutely pointed; rostral compressed, keeled above, half as long as the shielded part of the head; frontal not longer than broad. Diameter of body 37 to 39 times in the total length. 17 to 19 scales round the middle of the body, 19 to 21 behind the head. Ventrals only a little larger than the contiguous scales, 217-227; subcaudals 5-7. Caudal disk about as long as the shielded part of the head. Uniform brown, each scale with a lighter margin; some yellow markings about the tail.

Total length 430 millim.

Ceylon (Central Provinces).

a, b. ♂ (V. 217, 219; C. 7, 7). Ceylon. (Types of *M. unimaculata*)  
 c. ♀ (V. 223; C. 5). Ceylon. Sir A. Smith [P.].

2. *Rhinophis punctatus*.

*Rhinophis punctatus*, *Müll. Zeitschr. f. Physiol.* iv. 1832, p. 248;  
*Dum. & Bibr.* vii. p. 157 (1854); *Peters, Uropelt.* p. 12, pl. ii. fig. 3  
 (1861); *Günth. Rept. Brit. Ind.* p. 184 (1864); *Jan, Icon. Gén.*  
 p. 48, l. 9, pl. ii. fig. 5 (1865); *Theob. Cat. Rept. Brit. Ind.* p. 128  
 (1876); *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 6; *Bouleng.*  
*Faun. Ind., Rept.* p. 255 (1890).

*Pseudo-Typhlops oxyrhynchus*, *Schleg. Abbild.* p. 43, pl. xii.  
 (1844).

Very closely allied to the preceding; differs in the more slender body, the diameter of which is 47 to 49 times in the total length, with more numerous ventrals (236-246), and in coloration. Yellowish, each scale with a black spot; the scales of the series adjoining the vertebral without spot.

Total length 390 millim.

Ceylon (Central Provinces).

a-b. ♂ (V. 246, 239; C. 9, 8). Paradenia. Col. Beddome [C.].  
 c-d. ♂ (V. 236; C. 8) & ♀ Ceylon. G. H. K. Thwaites, Esq. [P.].  
 (V. 240; C. 6).

3. *Rhinophis planiceps*.

*Typhlops philippinus*, *Cuv. R. A.* 2nd ed. ii. p. 74 (1829).

*Rhinophis philippinus*, *Müll. Zeitschr. f. Physiol.* iv. 1832, p. 248;  
*Dum. & Bibr.* vii. p. 154, pl. lix. fig. 1 (1854); *Peters, Uropelt.*

p. 15 (1861); *Günth. Rept. Brit. Ind.* p. 184 (1864); *Jan, Icon. Gén.* p. 46, l. 9, pl. ii. fig. 2 (1865).

*Rhinophis planiceps*, *Peters, op. cit.* p. 17, pl. i. fig. 1; *Theob. Cat. Rept. Brit. Ind.* p. 129 (1876); *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 6; *Bouleng. Faun. Ind., Rept.* p. 255 (1890).

Snout acutely pointed; rostral obtusely keeled above, about two fifths the length of the shielded part of the head; frontal usually longer than broad. Diameter of body 24 to 34 times in the total length. 17 scales round the middle of the body, 19 behind the head. Ventrals only a little larger than the contiguous scales, 153-172; subcaudals 3-6. Caudal disk about as long as the shielded part of the head. Uniform brown, each scale with a lighter margin; sometimes a yellowish blotch near the head or on the anal region.

Total length 270 millim.

Ceylon (Central Provinces).

- |   |         |  |
|---|---------|--|
| a. ♀ (V. 172; C. 4).                          | Ceylon. | C. R. Buller, Esq. [P.]<br>(Type of <i>R. planiceps</i> .) |
| b. ♂ (V. 153; C. 6).                          | Ceylon. | C. R. Buller, Esq. [P.]                                    |
| c. ♂ (V. 156; C. 5).                          | Ceylon. | Sir A. Smith [P.]  |
| d, e. ♂ (V. 155; C. 6) &<br>♀ (V. 170; C. 3). | Ceylon. |  |

#### 4. *Rhinophis trevelyanus*.

*Dapatnaya trevelyana*, *Kelaart, Prodr. Faun. Zeyl.* ii. p. 17 (1853).

*Mytilia gerrardi*, *Gray, Proc. Zool. Soc.* 1858, pp. 58, 263, pl. xiii.

*Rhinophis homolepis* (*Hempr.*), *Peters, Uropelt.* p. 14, pl. ii. fig. 2 (1861); *Jan, Icon. Gén.* p. 48, l. 9, pl. ii. fig. 4 (1865).

— *trevelyanus*, *Günth. Rept. Brit. Ind.* p. 185 (1864); *Theob. Cat. Rept. Brit. Ind.* p. 129 (1876); *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 7; *Bouleng. Faun. Ind., Rept.* p. 256 (1890).

Snout acutely pointed; rostral obtusely keeled above, about two fifths the length of the shielded part of the head; frontal usually longer than broad. Diameter of body 26 to 30 times in the total length. 17 scales round the middle of the body, 19 behind the head. Ventrals only a little larger than the contiguous scales, 190-204; subcaudals 3-6. Caudal disk as long as the shielded part of the head. Blackish brown above; yellow beneath, each scale with a black spot; a series of triangular yellow spots along each side of the body.

Total length 275 millim.

Ceylon (Central Provinces).

- |  |         |  |
|--|---------|--|
| a-b, c-d. ♂ (V. 190; C. 6),<br>♀ (V. 200, 204; C. 4, 5),<br>& hgr. (V. 192; C. 5). | Ceylon. | Dr. Kelaart.   |
| e-g. ♂ (V. 194; C. 5), ♀<br>(V. 203; C. 3), & hgr.<br>(V. 196; C. 4).              | Ceylon. | R. College of Surgeons.<br>(Types of <i>M. gerrardi</i> .) |
| h, i-l. ♂ (V. 198; C. 6) & ♀<br>(V. 200, 198, 192; C. 3, 4, 5).                    | Ceylon. | Col. Beddome [C.].   |



5. *Rhinophis sanguineus*.

*Rhinophis sanguineus*, *Beddome, Proc. Zool. Soc.* 1863, p. 227; *Günth. Rept. Brit. Ind.* p. 186, pl. xvii. fig. A (1864); *Theob. Cat. Rept. Brit. Ind.* p. 130 (1876); *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 8; *Bouleng. Faun. Ind., Rept.* p. 25<sup>r</sup> (1890).

— *microlepis*, *Beddome, Proc. Zool. Soc.* 1863, p. 227, pl. xxvi. fig. 2.

Snout acutely pointed; rostral obtusely keeled above, about one third the length of the shielded part of the head; frontal longer than broad. Diameter of body 30 to 38 times in the total length. 15 scales round the middle of the body, 19 behind the head. Ventrals nearly twice as large as the contiguous scales, 182-214; subcaudals 5-10. Caudal disk as long as the shielded part of the head; subcaudal and præanal scales pluricarinate in the male. Bluish black above, with or without some small light spots; belly and three or four outer series of scales bright red spotted with black; caudal shield black, with a red band on each side, and sometimes a median one.

Total length 400 millim.

Western Ghats, Southern Indian.

- |   |                                  |   |
|---|----------------------------------|---|
| a. ♂ (V. 197; C. 9).  | Cherambody, Wynad,<br>3500 feet. | Col. Beddome [C.]<br>(One of the types.)              |
| b. Yg. (V. 199; C. 10).   | Cherambody, Wynad,<br>3500 feet. | Col. Beddome [C.]<br>(Type of <i>R. microlepis</i> .) |
| c-e, f-g, h. ♂ (V. 211,<br>201, 198; C. 9, 9, 9), ♀<br>(V. 214, 199; C. 7, 6),<br>& yg. (V. 182; C. 6). | Wynad.                           | Col. Beddome [C.]                                     |
| i. ♀ (V. 198; C. 5).  | Manantoddy, Wynad,<br>2000 feet. | E. Pringle, Esq.<br>[P.].                             |
| k. ♀ (V. 205; C. 6).  | Nilgherries.                     |   |

6. *Rhinophis travancoricus*. (PLATE IX. fig. 3.)

Snout acutely pointed; rostral feebly compressed, not keeled, about one third the length of the shielded part of the head; frontal longer than broad. Diameter of body 34 times in the total length. 17 scales round the middle of the body, 19 behind the head, Ventrals about once and a half the size of the contiguous scales, 146; subcaudals 6. Caudal disk a little shorter than the shielded part of the head. Dark purplish brown, the scales on the sides and belly edged with whitish; anal region black; lower surface of tail yellow.

Total length 170 millim.

Travancore.

- |       |             |                            |
|-------|-------------|----------------------------|
| a. ♀. | Trevandrum. | H. S. Ferguson, Esq. [P.]. |
|-------|-------------|----------------------------|



7. *Rhinophis blythii*.

- Rhinophis blythii*, *Kelaart, Prodr. Faun. Zeyl.* ii. p. 14 (1853);  
*Peters, Uropelt.* p. 17 (1861); *Beddome, Ann. & Mag. N. H.* (5)  
 xvii. 1886, p. 8; *Bouleng. Faun. Ind., Rept.* p. 256 (1890).  
*Mytilia templetonii*, *Gray, Proc. Zool. Soc.* 1858, p. 263.  
*Rhinophis blythii*, part., *Günth. Rept. Brit. Ind.* p. 186 (1864);  
*Theob. Cat. Rept. Brit. Ind.* p. 130 (1876).

Snout acutely pointed; rostral very slightly compressed, about one third the length of the shielded part of the head; frontal longer than broad. Diameter of body 22 to 32 times in the total length. 17 scales round the middle of the body, 19 behind the head. Ventrals only a little larger than the contiguous scales, 148-162; subcaudals 4-7. Caudal disk one half or three fifths the length of the shielded part of the head; some of the distal caudal scales with faint traces of keels. Dark brown; sides with vertical yellow spots or a festooned or zigzag band along the anterior half of the body; a yellow ring round the base of the tail.

Total length 370 millim.

Ceylon (Central Provinces).

- |   |                          |   |
|---|--------------------------|---|
| <i>a-c.</i> ♂ (V. 156, 148; C. 7,<br>7) & ♀ (V. 167; C. 4). | Ceylon.                  | R. Templeton, Esq. [P.]<br>(Types of <i>M. templetonii</i> .) |
| <i>d.</i> Yg. (V. 162; C. 7).                               | Ceylon.                  | Col. Beddome [C.].  |
| <i>e.</i> ♀ (V. 160; C. 4).                                 | Ceylon.                  |   |
| <i>f-g.</i> ♀ (V. 156; C. 5) &<br>yg. (V. 148; C. 6).       | Punduloya, 4000<br>feet. | E. E. Green, Esq. [P.].                                       |

3. *SILYBURA*.

- Uropeltis*, part., *Cuv. R. A.* 2nd ed. ii. p. 76 (1829).  
*Pseudo-Typhlops*, part., *Schleg. Abbild.* p. 40 (1844).  
*Siluboura*, *Gray, Cat. Liz.* p. 142 (1845).  
*Coloburus*, *Dum. & Bibr. Erp. Gén.* vii. p. 163 (1854).  
*Mytilia*, part., *Gray, Proc. Zool. Soc.* 1858, p. 263.  
*Crealia*, *Gray, l. c.* p. 264.  
*Silybura*, *Peters, Uropelt.* p. 20 (1861); *Günth. Rept. Brit. Ind.*  
 p. 189 (1864); *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886,  
 p. 10; *Bouleng. Faun. Ind., Rept.* p. 257 (1890).

Eye in the ocular shield; no supraocular, no temporal. No mental groove. Tail conical or obliquely truncated, terminating in a small scute which is square at the end or bicuspid, with the points side by side.

Peninsular India; one species in Ceylon.

*Synopsis of the Species.*

I. 19 scales round the middle of the body.

A. Upper surface of tail convex.

- |  |                             |
|--|-----------------------------|
| 198-218 ventrals; diameter of body 30<br>to 40 times in total length . . . . . | 3. <i>grandis</i> , p. 148. |
| 163-178 ventrals; diameter of body 23<br>to 30 times in total length . . . . . | 8. <i>nigra</i> , p. 151.   |

B. Tail with a flat disk of strongly keeled scales; 203-230 ventrals; diameter of body 34 to 40 times in total length.

11. *broughami*, p. 152.

II. 17 scales round the middle of the body.

A. Rostral entirely separating the nasals.

141-166 ventrals; diameter of body 22 to 31 times in total length; eye not half length of ocular . . . . .

1. *melanogaster*, p. 146.

161-180 ventrals; diameter of body 30 to 38 times in total length; eye half length of ocular . . . . .

2. *pulneyensis*, p. 147.

B. Nasals in contact behind the rostral.

1. Eye not half the length of the ocular shield.

a. Portion of rostral seen from above as long as its distance from the frontal, or shorter; snout obtuse.

a. Tail round or slightly compressed; upper caudal scales distinctly keeled; terminal scute without distinct points; 151-180 ventrals; diameter of body 25 to 33 times in the total length. 4. *petersii*, p. 148.

β. Tail round or slightly compressed; upper caudal scales smooth or faintly keeled; terminal scute very small and bicuspid.

152-173 ventrals; diameter of body 27 to 40 times in total length . . . . .

5. *maculata*, p. 149.

174-188 ventrals; diameter of body 32 to 38 times in total length . . . . .

6. *liura*, p. 149.

γ. Tail with a flat disk of strongly keeled scales; 165-172 ventrals; diameter of body 30 to 33 times in total length. . . . . 16. *rubrolineata*, p. 155.

b. Portion of rostral visible from above longer than its distance from the frontal; upper caudal scales strongly keeled.

a. Rostral not more than one third the length of the shielded part of head.

193-234 ventrals; diameter of body 30 to 46 times in total length; eye hardly one third length of ocular . . . . .

7. *ocellata*, p. 150.

184-195 ventrals; diameter of body 30 to 35 times in total length; eye more than one third length of ocular . . . . .

9. *nitida*, p. 151.

144-172 ventrals; diameter of body 25 to 32 times in total length . . . . .

14. *elliotti*, p. 154.

β. Rostral compressed, keeled above, at least two fifths the length of the shielded part of head; snout acutely pointed.

156-168 ventrals; diameter of body 26 to 32 times in total length; caudal disk quite flat. . . . .

10. *dindigalensis*, p. 152.

- 213 ventrals; diameter of body 38 times in total length; rostral half length of shielded part of head . . . . . 12. *macrorhynchus*, [p. 153.]
- 180-188 ventrals; diameter of body 33 to 40 times in total length . . . . . 13. *beddomii*, p. 153.
2. Eye half the length of the ocular, or more; snout obtuse.
- a. Portion of rostral seen from above longer than its distance from the frontal.
- 144-157 ventrals; diameter of body 28 to 38 times in total length; rostral one third length of shielded part of head . . . . . 15. *phipsonii*, p. 155.
- 139-153 ventrals; diameter of body 25 to 32 times in total length; rostral not quite one third length of shielded part of head . . . . . 17. *myhendree*, p. 156.
- b. Portion of rostral visible from above as long as its distance from the frontal.
- 142-150 ventrals; diameter of body 30 to 32 times in total length . . . . . 18. *madurensis*, p. 156. [p. 157.]
- 127-136 ventrals; diameter of body 25 to 33 times in total length . . . . . 19. *rubromaculata*,
- c. Portion of rostral visible from above shorter than its distance from the frontal.
- 128-130 ventrals; diameter of body 26 or 27 times in total length; eye half length of ocular . . . . . 20. *arcticeps*, p. 157.
- 120-146 ventrals; diameter of body 21 to 29 times in total length; eye more than half length of ocular . . . . . 21. *brevis*, p. 158.
- III. 15 scales round the middle of the body; 128-140 ventrals; diameter of body 24 to 29 times in the total length.
22. *macrolepis*, p. 159.

### 1. *Silybura melanogaster*.

*Mytilia* (*Crealia*) *melanogaster*, Gray, *Proc. Zool. Soc.* 1858, p. 264, fig.

*Plectrurus ceylonicus*, Peters, *Mon. Berl. Ac.* 1859, p. 388.

*Rhinophis melanogaster*, Peters, *Uropelt.* p. 18, pl. ii. fig. 4 (1864); *Jan, Icon. Gén.* p. 47, l. 9, pl. ii. fig. 4 (1865).

— *blythii*, part., *Günth. Rept. Brit. Ind.* p. 186 (1864); *Theob. Cat. Rept. Brit. Ind.* p. 130 (1876).

*Silybura melanogaster*, *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 20; *Boulenger, Favn. Ind., Rept.* p. 260 (1890).

Snout pointed; rostral about one third the length of the shielded part of the head, the portion visible from above longer than its distance from the frontal, entirely separating the nasals; frontal

longer than broad. Eye small, not half the length of the ocular. Diameter of body 22 to 31 times in the total length. Scales in 17 rows round the middle of the body, 19 behind the head. Ventrals but little larger than the contiguous scales, 141-166. Subcaudals 6-10. Tail round or slightly compressed, the terminal scute with two small spines; caudal scales with very faint keels. Dark brown, with yellow spots more or less confluent into a lateral band. In three young specimens in the collection (*k-m*) the colour is yellow, each scale of the upper surface, chin, and tail with a dark brown spot.

Total length 270 millim.

Ceylon (Central Provinces).

<i>a-d.</i> ♂ (V. 157, 152; C. 10, 10) & ♀ (V. 164, 165; C. 5, 5).	Ceylon.	(Types.)
<i>e-i.</i> ♂ (V. 150, 157; C. 10, 9) & ♀ (V. 162, 166, 162; C. 6, 6, 7).	Ceylon.	G. H. K. Thwaites, Esq. [P.].
<i>k, l-m.</i> Yg. (V. 153, 141, 144; C. 9, 10, 9).	Ceylon.	G. H. K. Thwaites, Esq. [P.].
<i>n.</i> ♂ (V. 153; C. 10).	Ceylon.	C. R. Buller, Esq. [P.].
<i>o.</i> ♂ (V. 152; C. 9).	Ceylon.	Sir A. Smith [P.].
<i>p.</i> ♂ (V. 155; C. 9).	Ceylon.	
<i>q.</i> Skeleton.	Ceylon.	

## 2. *Silybura pulneyensis*.

*Plectrurus pulneyensis*, *Beddome, Proc. Zool. Soc.* 1863, p. 228, pl. xxv. fig. 2.

*Rhinophis pulneyensis*, *Günth. Rept. Brit. Ind.* p. 187, pl. xvii. fig. C (1864); *Theob. Cat. Rept. Brit. Ind.* p. 131 (1876).

*Silybura wood-masoni*, *Theob. op. cit.* p. 135.

— *guentheri*, *Beddome, Proc. Zool. Soc.* 1878, p. 801, and *Ann. & Mag. N. H.* (5) xvii. 1886, p. 23.

— *pulneyensis*, *Beddome, Ann. & Mag. N. H.* (5) xvii. p. 23; *Bouleng. Faun. Ind., Rept.* p. 260 (1890); *Boettg. Ber. Offenb. Ver. Nat.* 1892, p. 76.

Snout obtusely pointed; rostral about one fourth the length of the shielded part of the head, longer than its distance from the frontal, entirely separating the nasals; frontal longer than broad. Eye half the length of the ocular. Diameter of body 30 to 33 times in the total length. 17 scales round the middle of the body, 19 behind the head. Ventrals about twice as large as the contiguous scales, 161-180. Subcaudals 6-13. Tail somewhat compressed, the terminal scute with two small points; usually some of the terminal scales with faint keels. Brown, with a few minute yellow specks on the back; a yellow lateral band anteriorly; belly with large yellow, usually alternating, spots or cross bands. In one specimen (*S. guentheri*, *Bedd.*) the belly is uniform yellow.

Total length 380 millim.

Pulney and Cumbum Hills (Madura District), Southern India, 5000-7000 feet.



- a.* ♀ (V. 178; C. 6). Pulney Hills. Col. Beddome [C.]  
(One of the types.)
- b-d, e, f.* ♂ (V. 180, 172, 175; C. 9, 8, 12) & ♀ (V. 172, 174; C. 8, 8). Pulney Hills. Col. Beddome [C.]
- g.* ♂ (V. 170; C. 13). Cumbum Hills, 5000 ft. Col. Beddome [C.]  
(Type of *S. guentheri*.)

### 3. *Silybura grandis*.

*Rhinophis grandis*, *Beddome, Madras Quart. Journ. Med. Sc.* 1867, fig.; *Theob. Cat. Rept. Brit. Ind.* p. 131 (1876).

*Silybura grandis*, *Günth. Ann. & Mag. N. H.* (4) i. 1868, p. 414; *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 11; *Bouleng. Faun. Ind., Rept.* p. 261 (1890).

Snout pointed; rostral one third or one fourth the length of the shielded part of the head, longer than its distance from the frontal, sometimes separating the nasals; frontal longer than broad. Eye very small, not half the length of the ocular. Diameter of body 30 to 40 times in the total length. Scales in 19 rows round the middle of the body, 21 behind the head. Ventrals about twice as large as the contiguous scales, 198-218; posterior ventrals pluricarinate in the male. Subcaudals 6-12. Tail round or slightly compressed, the terminal scute with two small spines; caudal scales more or less strongly pluricarinate. Dark violet; belly with alternating large yellow spots or cross bands.

Total length 480 millim.

Anamallay Mountains, S. India.

- a.* ♂ (V. 206; C. 10). Anamallay Forests, 4000 feet. Col. Beddome [C.]  
(Type.)
- b, c-d.* ♂ (V. 208; C. 10) & ♀ (V. 214, 213; C. 8, 7). Anamallay Forests, 4000 feet. Col. Beddome [C.]
- c-m.* ♂ (V. 198, 200; C. 10, 12), ♀ (V. 214, 206, 210, 213; C. 7, 7, 8, 6), & yg. (V. 205, 218; C. 11, 7). Anamallays, 4700 feet. W. Davison, Esq.  
[P.]
- n.* Skeleton. Anamallays, 4700 feet. W. Davison, Esq.  
[P.]

### 4. *Silybura petersii*. (PLATE VI. fig. 1.)

*Silybura petersi*, *Beddome, Proc. Zool. Soc.* 1878, p. 154, and *Ann. & Mag. N. H.* (5) xvii. 1886, p. 22; *Bouleng. Faun. Ind., Rept.* p. 261 (1890).

Snout obtusely pointed; rostral hardly one fourth the length of the shielded part of the head, the portion visible from above shorter than its distance from the frontal; nasals in contact; frontal longer than broad. Eye small, not half the length of the ocular. Diameter of body 25 to 33 times in the total length. 17 scales round the middle of the body, 19 behind the head. Ventrals about twice



as large as the contiguous scales, 151-180. Subcaudals 6-11. Tail round or slightly compressed, the terminal upper scales more or less distinctly pluricarinate; the terminal scute with a transverse ridge, without distinct points. Brown, with or without yellowish dots above; belly with small irregular yellowish spots; no yellow band on the side of the tail.

Total length 190 millim.

Anamallays.

- a, b-d.* ♂ (V. 167, 180, 157; Anamallays, 4000 feet. Col. Beddome [C].  
C.11,10,10) & ♀ (V. 160;  
C. 6). (Types.)  
*e-k.* ♂ (V. 154, 157, 151, Anamallays, 4700 feet. W. Davison, Esq.  
154, 154; C.10,10,10,10,  
10) & yg. (V.163; C.6). [P.]

### 5. *Silybura maculata*. (PLATE VI. fig. 2.)

*Silybura maculata*, *Beddome, Proc. Zool. Soc.* 1878, p. 154, and *Ann. & Mag. N. H.* (5) xvii. 1886, p. 22; *Bouleng. Faun. Ind., Rept.* p. 261 (1890).

Snout obtuse; rostral about one fourth the length of the shielded part of the head, the portion visible from above as long as its distance from the frontal; nasals in contact; frontal longer than broad. Eye small, not half the length of the ocular. Diameter of body 27 to 40 times in the total length. 17 scales round the middle of the body, 19 behind the head. Ventrals nearly twice as large as the contiguous scales, 152-173. Subcaudals 8-13. Tail rounded or a little compressed; scales smooth or a few of the terminals faintly keeled; terminal scute very small, bicuspid. Dark brown or black, with several deep red blotches along the sides of the anterior portion of the trunk and about the tail, rarely along the whole of the body.

Total length 380 millim.

Anamallay and Travancore Hills, 6000-7000 feet.

- a-c, d-e.* ♂ (V. 159, 154, Anamallays. Col. Beddome [C].  
156, 154; C.12, 11, 13,  
11) & ♀ (V. 165; C. 8). (Types.)  
*f-i.* ♀ (V. 170; C. 8), hgr. High range of Travancore, 7000 feet. H. S. Ferguson, Esq.  
(V. 173; C. 8), & yg. [P].  
(V. 158, 152; C. 8, 12).

### 6. *Silybura liura*.

*Silybura liura*, *Günth. Proc. Zool. Soc.* 1875, p. 228, pl. xxxi. fig. B; *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 18; *Bouleng. Faun. Ind., Rept.* p. 262 (1890).

Snout obtusely pointed; rostral about one third the length of the shielded part of the head, the portion visible from above as long as its distance from the frontal; nasals in contact; frontal longer than broad. Eye small, not half the length of the ocular. Diameter of body 32 to 38 times in the total length. 17 scales round

the middle of the body, 19 behind the head. Ventrals twice as broad as the contiguous scales, 174-188. Subcaudals 8-12. Tail round or slightly compressed, the terminal scute very small and bicuspid; caudal scales smooth or with very faint keels. Purplish brown above, each scale edged with darker, with transverse series of small yellow, black-edged ocelli; sides and lower parts with large alternating black and yellow spots or cross bands.

Total length 320 millim.

Tinnevely and Madura Hills, 3000-5000 feet, S. India.

- a. ♂ (V. 183; C. 12). Madura Hills. Col. Beddome [C.]. (Type.)  
 b-d. ♂ (V. 174, 177; C. 12, 12) & ♀ (V. 188; C. 8). Tinnevely Hills. Col. Beddome [C.].

### 7. *Silybura ocellata*.

*Silybura ocellata*, Beddome, *Proc. Zool. Soc.* 1863, p. 226, and *Madras Journ. Med. Sc.* 1863, fig.; *Günth. Rept. Brit. Ind.* p. 190, pl. xvii. fig. E (1864); *Theob. Cat. Rept. Brit. Ind.* p. 133 (1876); *Beddome, Ann. & Mag. N. II.* (5) xvii. 1886, p. 17; *Bouleng. Faun. Ind., Rept.* p. 262, fig. (1890).

— ochracea, *Beddome, Proc. Zool. Soc.* 1878, p. 801, and *Ann. & Mag. N. II.* (5) xvii. p. 17.

— dupeni, *Beddome, Proc. Zool. Soc.* 1878, p. 801.

Snout pointed; rostral about one fourth the length of the shielded part of the head, the portion visible from above longer than its distance from the frontal; nasals forming a suture behind the rostral; frontal usually longer than broad. Eye very small, hardly one third the length of the ocular. Diameter of body 30 to 46 times in the total length. 17 scales round the middle of the body, 19 behind the head. Ventrals about twice as large as the contiguous scales, 193-234. Subcaudals 6-11. Tail round or slightly flattened, the terminal scute with two small points; scales on the upper surface of the tail strongly pluricarinatè. Yellowish or brown above, usually with transverse series of small yellow black-edged ocelli; belly brown with large yellow spots or cross bands, or yellow mottled or blotched with brown.

Total length 500 millim.

Anamallay, Nilgherry, and Tinnevely Mountains, 2000-4500 feet.

- a. ♀ (V. 199; C. 8). Walaghat, Nilgherries, 3500 feet. Col. Beddome [C.]. (One of the types.)  
 b. ♂ (V. 197; C. 10). Nilgherries.  
 c-d. ♀ (V. 197, 196; C. 8, 7). Wynad. Col. Beddome [C.].  
 e, f-g, h-i. ♂ (V. 223; C. 9) & ♀ (V. 225, 229, 220, 230; C. 8, 6, 7, 7). Anamallays. Col. Beddome [C.]. (Types of *S. ochracea*.)  
 k. ♂ (V. 231; C. 10). Neliampetty, Anamallays, 3000 ft. Col. Beddome [C.]. (Type of *S. dupeni*.)

- l, m. ♂ (V. 214; C. 11) Cochin, Anamallays. Col. Beddome [C.]  
 & ♀ (V. 277; C. 6).  
 n-p, q-s. ♂ (V. 229, 222; Anamallays. Col. Beddome [C.]  
 C. 10, 9) & ♀ (V. 225,  
 227, 218, 222; C. 7, 7,  
 7, 7).

8. *Silybura nigra*.

*Silybura melanogaster* (non Gray), *Günth. Proc. Zool. Soc.* 1875, p. 227,  
 pl. xxxi. fig. A.  
 — *nigra*, *Beddome, Proc. Zool. Soc.* 1878, p. 154, and *Ann. &*  
*Mag. N. H.* (5) xvii. 1886, p. 12; *Bouleng. Faun. Ind., Rept.*  
 p. 263 (1890).

Snout pointed; rostral one third to two fifths the length of the shielded part of the head, the portion visible from above longer than its distance from the frontal, sometimes separating the nasals; frontal a little longer than broad. Eye small, not half the length of the ocular. Diameter of body 23 to 30 times in the total length. Scales in 19 rows round the middle of the body, as well as behind the head. Ventrals about twice as large as the contiguous scales, 163-178. Subcaudals 6-11. Tail rounded, the terminal scute with two small points; upper caudal scales more or less strongly pluricarinate. Blackish or dark violet, above with transverse series of small round yellow spots or ocelli; a lateral series of large yellow spots, with may be confluent into a band.

Total length 280 millim.

Hills of Southern India (Pulney, Anamallay, Madura, Tinnevely), 4000-5000 feet.

- a. ♂ (V. 166; C. 11). Anamallays. Col. Beddome [C.].  
 b. ♂ (V. 163; C. 10). Travancore. Col. Beddome [C.].  
 (Types of *S. melanogaster*).  
 c. Hgr. ♀ (V. 171; C. 6). Travancore. Col. Beddome [C.].  
 d-g. ♀ (V. 176, 172, 178, Pulney Hills. Col. Beddome [C.].  
 178; C. 7, 6, 7, 7). (Types of *S. nigra*).  
 h-i. ♂ (V. 170, 174; C. Pulney Hills. Col. Beddome [C.].  
 10, 9).

9. *Silybura nitida*. (PLATE VI. fig. 3.)

*Silybura nitida*, *Beddome, Proc. Zool. Soc.* 1878, p. 154, and *Ann. &*  
*Mag. N. H.* (5) xvii. 1886, p. 19; *Bouleng. Faun. Ind., Rept.*  
 p. 263 (1890).

Snout obtusely pointed; rostral about one third the length of the shielded part of the head, the portion visible from above longer than its distance from the frontal; nasals in contact; frontal as long as broad or a little longer than broad. Eye small, not half the length of the ocular. Diameter of body 30 to 35 times in the total length. 17 scales round the middle of the body, 19 behind the head. Ventrals twice as broad as the contiguous scales, 184-195. Subcaudals 5-11. Tail round or slightly flattened above, the terminal scales strongly pluricarinate; the terminal scute with a transverse

ridge and two more or less distinct points. Black, inferiorly with distant large yellow spots, which usually alternate but sometimes meet to form cross bands.

Total length 350 millim.

Anamallays.

*a-b, c-e.* ♂ (V. 195, 187; C. 11, 11) & ♀ (V. 191, 184, 192; C. 6, 7, 5). Cochin side of the Anamallays, 4000-5000 ft. Col. Beddome [C.] (Types.)

#### 10. *Silybura dindigalensis*. (PLATE VII. fig. 1.)

*Silybura dindigalensis*, *Beddome, Proc. Zool. Soc.* 1877, p. 167, and *Ann. & Mag. N. H.* (5) xvii. 1886, p. 13; *Bouleng. Faun. Ind., Rept.* p. 264 (1890).

Snout acutely pointed; rostral compressed, about two fifths the length of the shielded part of the head, the portion visible from above much longer than its distance from the frontal; nasals in contact behind the rostral; frontal longer than broad. Eye very small, not half the length of the ocular. Diameter of body 26 to 32 times in the total length. 17 scales round the middle of the body, 19 behind the head. Ventrals twice as broad as the contiguous scales, 156-168. Subcaudals 5-10; tail obliquely truncate, flat above, with strongly pluricarinate scales; terminal scute with a transverse ridge and two more or less distinct points. Yellowish above, the scales edged with darker, with small dark brown spots; belly dark brown, with yellow spots or irregular cross bars; a yellow streak on the lips, continued along each side of the neck.

Total length 355 millim.

Sirumallay Hills, Madura District, 4000-5000 feet.

*a, b-d.* ♂ (V. 156; C. 10) & ♀ (V. 166, 168, 167; C. 6, 6, 5). Sirumallays, near Dindigal. Col. Beddome [C.] (Types.)

#### 11. *Silybura broughami*. (PLATE VII. fig. 2.)

*Silybura broughami*, *Beddome, Proc. Zool. Soc.* 1878, p. 800, and *Ann. & Mag. N. H.* (5) xvii. 1886, p. 11; *Bouleng. Faun. Ind., Rept.* p. 264 (1890).

— *levingii, Beddome, Proc. Zool. Soc.* 1878, p. 801.

Snout acutely pointed; rostral compressed, obtusely keeled above, about two fifths the length of the shielded part of the head, the portion visible from above much longer than its distance from the frontal; nasals in contact behind the rostral; frontal as broad as long, or slightly longer than broad. Eye very small, not half the length of the ocular. Diameter of body 34 to 40 times in the total length. 19 scales round the middle of the body as well as behind the head. Ventrals not twice as broad as the contiguous scales, 203-230. Subcaudals 7-10; tail obliquely truncate, flat above, with strongly pluricarinate scales; terminal scute bicuspid. Brown



above, with more or less distinct transverse series of small yellow, black-edged ocelli; sides with a series of large yellow spots; ventrals dark brown.

Total length 410 millim.

Sirumallay and Lower Pulney Hills, S. India.

- |  |   |  |
|--|---|--|
| a. ♀ (V. 227; C. 7).                       | Sirumallay Hills, Madura District, 5500 ft. | Col. Beddome [C.]<br>(Type.)                         |
| b-c. ♂ (V. 203; C. 10) & ♀ (V. 230; C. 8). | Lower Pulney Hills, 4000 ft.                | Col. Beddome [C.]<br>(Types of <i>S. levingii</i> .) |

### 12. *Silybura macrorhynchus*. (PLATE VIII. fig. 1.)

*Silybura macrorhyncha*, *Beddome, Proc. Zool. Soc.* 1877, p. 167, and *Ann. & Mag. N. H.* (5) xvii. 1886, p. 19; *Bouleng. Faun. Ind., Rept.* p. 204 (1890).

Snout acutely pointed, much produced; rostral strongly compressed, keeled above, half the length of the shielded part of the head; nasals in contact behind the rostral; frontal as broad as long. Eye very small, not one third the length of the ocular. Diameter of body 38 times in the total length. 17 scales round the middle of the body and 19 behind the head. Ventrals not quite twice as large as the contiguous scales, 213. Subcaudals 6 (♀); end of tail subtruncate, the rugose part small and rather flat, the scales with three to five strong keels; terminal scute bicuspid. Upper parts uniform brown, lower parts mixed with yellow; a yellow streak from the mouth along each side of the neck; a yellow streak on each side of the lower surface of the tail, connected with its fellow by a cross bar on the anal region.

Total length 570 millim.

Anamallays.

- |                      |                         |                              |
|----------------------|-------------------------|------------------------------|
| a. ♀ (V. 213; C. 6). | Above Ponachi, 4000 ft. | Col. Beddome [C.]<br>(Type.) |
|----------------------|-------------------------|------------------------------|

### 13. *Silybura beddomii*.

*Silybura beddomii*, *Günth. Ann. & Mag. N. H.* (3) ix. 1862, p. 56, and *Rept. Brit. Ind.* p. 190, pl. xvii. fig. F (1864); *Theob. Cat. Rept. Brit. Ind.* p. 133 (1876); *Bouleng. Faun. Ind., Rept.* p. 265 (1890).

— *elliotti*, part., *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 20.

Snout acutely pointed, much produced; rostral strongly compressed, keeled above, two fifths the length of the shielded part of the head; nasals in contact behind the rostral; frontal longer than broad. Eye very small, not half the length of the ocular. Diameter of body 33 to 40 times in the total length. 17 scales round the middle of the body, 19 behind the head. Ventrals not twice as large as the contiguous scales, 180-188. Subcaudals 6-7 (♀); end of tail subtruncate, convex or somewhat flattened above, the



scales with three to five strong keels; terminal scute with a transverse ridge and two more or less distinct points. Brown, lower parts mixed with yellow; a yellow streak on each side of the neck; a yellow band across the anal region; none on the sides of the tail.

Total length 275 millim.

Anamallays.

a-c. ♀ (V. 188, 182, 180; C. 6, 6, 7).	Anamallays.	Col. Beddome [C.] (Types.)
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#### 14. *Silybura ellioti*.

*Siluboura ceylonicus*, Gray, *Cat. Liz.* p. 142 (1845).

*Siluboura ellioti*, Gray, *Proc. Zool. Soc.* 1858, p. 262.

*Silybura ellioti*, Peters, *Uropelt.* p. 21 (1861); *Günth. Proc. Zool. Soc.* 1875, p. 228; *Bouleng. Faun. Ind., Rept.* p. 265 (1890).

*Coloburus ceylanicus*, Jan, *Icon. Gén.* l. 9, pl. ii. fig. 6 (1865).

*Silybura ellioti*, part., *Günth. Rept. Brit. Ind.* p. 190 (1864); *Theob. Cat. Rept. Brit. Ind.* p. 133; *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 20.

— *punctata*, *Günth. Proc. Zool. Soc.* 1875, p. 229.

— *beddomii*, part., *Günth. l. c.*

Snout pointed; rostral about one third the length of the shielded part of the head, the portion visible from above longer than its distance from the frontal; nasals in contact behind the rostral; frontal longer than broad. Eye very small, not half the length of the ocular. Diameter of body 25 to 32 times in the total length. 17 scales round the middle of the body, 19 behind the head. Ventrals nearly twice as large as the contiguous scales, 144–172. Subcaudals 6–10. End of tail convex or somewhat flattened above; upper caudal scales with three to six strong keels; terminal scute with a transverse ridge and two more or less distinct points. Dark brown, uniform or with yellow dots above and small yellow dots inferiorly; a more or less distinct yellow line on each side of the neck; a yellow band on each side of the tail, connected with its fellow by a transverse bar across the anal region.

Total length 240 millim.

Mountains of Southern India.

a. ♂ (V. 168; C. 9).	Near Madras.	Sir W. Elliot [P.] (Type.)
b-c. ♂ (V. 168; C. 10) & ♀ (V. 172; C. 6).	Jeypore Hills, Vizagapatam.	Col. Beddome [C.]
d. ♀ (V. 144; C. 7).	Golcondah Hills.	Col. Beddome [C.] (Type of <i>S. punctata</i> .)
e-h. ♂ (V. 154; C. 9, 7) & ♀ (V. 157, 151, 152; C. 7, 7, 6).	Pulney Hills.	Col. Beddome [C.] (Types of <i>S. punctata</i> .)
i. ♀ (V. 155; C. 7).	Anamallays.	Col. Beddome [C.] (Type of <i>S. punctata</i> .)
k-g. ♀ (V. 169, 167, 170, 170; C. 7, 6, 7, 6) & yg. (V. 167, 160, 166; C. 7, 8, 9).	Anamallays.	Col. Beddome [C.]
r. ♂ (V. 154; C. 9).	Balarangams, Mysore.	Col. Beddome [C.]

s. ♀ (V. 162; C. 7).	Yerkand, Shevaroys.	Dr. J. R. Henderson [P.].
t-u. ♂ (V. 151; C. 10) & ♀ (V. 172; C. 7).	N. Canara.	Col. Beddome [C.].
v. ♂ (V. 148; C. 11).	Madras Presidency.	Col. Beddome [C.].

15. *Silybura phipsonii*.

*Silybura elliotti*, part., *Günth. Rep. Brit. Ind.* p. 190 (1864); *Theob. Cat. Rept. Brit. Ind.* p. 133 (1876); *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 20.

— *ceylonica*, part., *Günth. Proc. Zool. Soc.* 1875, p. 228.

— *hipsonii*, *Mason, Ann. & Mag. N. H.* (6) i. 1888, p. 184; *Bouleng. Faun. Ind., Rept.* p. 266 (1890).

Snout obtusely pointed; rostral one third the length of the shielded part of the head, the portion visible from above longer than its distance from the frontal; nasals in contact behind the rostral; frontal longer than broad. Eye rather more than half the length of the ocular. Diameter of body 28 to 38 times in the total length. Scales in 17 rows round the middle of the body, in 17 or 19 round the neck. Ventrals nearly twice as large as the contiguous scales, 144–157. Subcaudals 7–12. End of tail flat above, obliquely truncate, with strongly bi- or quadricarinate scales; terminal scute with a transverse ridge and two more or less distinct points. Brown, uniform or with yellowish dots above; a more or less marked short yellow streak on each side from the commissure of the mouth; a yellow band on each side of the tail, connected with its fellow by a transverse bar across the anal region.

Total length 280 millim.

Bombay Ghats, North Canara, Mysore.

a-b. ♀ (V. 150, 157; C. 8, 8).	Bombay.	Dr. Leith [P.].
c. ♂ (V. 148; C. 11).	Deccan.	Col. Sykes [P.].
d. ♀ (V. 152; C. 8).	N. Canara.	Col. Beddome [C.].
e. ♀ (V. 145; C. 7).	Balarangamis.	Col. Beddome [C.].
f. ♀ (V. 149; C. 8).	India.	Zool. Soc.
g-i. ♂ (V. 144; C. 12) & ♀ (V. 152, 144; C. 7, 9).	India.	

16. *Silybura rubrolineata*. (PLATE VIII. fig. 2.)

*Silybura rubrolineata*, *Günth. Proc. Zool. Soc.* 1875, p. 228; *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 14; *Bouleng. Faun. Ind., Rept.* p. 266 (1890).

Snout obtusely pointed; rostral about one fourth the length of the shielded part of the head, the portion visible from above as long as its distance from the frontal; nasals in contact; frontal as broad as long or slightly longer than broad. Eye small, not half the length of the ocular. Diameter of body 30 to 33 times in the total length. 17 scales round the middle of the body, 19 behind the head. Ventrals twice as broad as the contiguous scales, 165–172. Subcaudals 6–8. End of tail flat above, obliquely truncate, with

strongly bi- or tricarinate scales; terminal scute with a transverse ridge but no points. Blackish brown, with a more or less marked bright red band along each side.

Total length 400 millim.

Travancore Hills and Anamallays.

- |                        |                   |                                  |
|------------------------|-------------------|----------------------------------|
| a. ♀ (V. 165; C. 6).   | Travancore Hills. | } Col. Beddome [C.].<br>(Types.) |
| b, c. ♂ (V. 172; C. 8) | Anamallays.       |                                  |
| & hgr. (V. 169; C. 6). |                   |                                  |

### 17. *Silybura myhendræ*. (PLATE IX. fig. 1.)

*Silybura nilherriensis*, var. *myhendræ*, *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 15.

— *myhendræ*, *Bouleng. Faun. Ind., Rept.* p. 267 (1890).

Snout obtuse; rostral one fourth or not quite one third the length of the shielded part of the head, the portion visible from above slightly longer than its distance from the frontal; nasals in contact; frontal slightly longer than broad. Eye somewhat more than half the length of the ocular. Diameter of body 25 to 32 times in the total length. 17 scales round the middle of the body, 19 behind the head. Ventrals twice as broad as the contiguous scales, 139–153. Subcaudals 7–8. Tail obliquely truncate, flat above, with strongly bi- or tricarinate scales; terminal scute with a transverse ridge, indistinctly bicuspid, rounded in the young. Dark purplish brown above, each scale with a crescentic yellowish posterior border; three or four dark transverse blotches behind the head; lower parts yellowish, with small purplish-brown spots in the adult, with large rhomboidal transverse blackish blotches in the young.

Total length 335 millim.

Travancore.

- |                        |                                      |   |
|------------------------|--------------------------------------|---|
| a. ♀ (V. 139; C. 7).   | Myhendra Mountain,<br>S. Travancore. | Col. Beddome [C.].<br>(One of the types.) |
| b. Yg. (V. 148; C. 8). | Trevandrum.                          | H. S. Ferguson, Esq.<br>[P.].             |

### 18. *Silybura madurensis*. (PLATE IX. fig. 2.)

*Silybura madurensis*, *Beddome, Proc. Zool. Soc.* 1878, p. 802; *Bouleng. Faun. Ind., Rept.* p. 267 (1890).

— *nilherriensis*, vars. *arcticeps*, part., et *picta*, *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 16.

Snout obtusely pointed; rostral about one fourth the length of the shielded part of the head, the portion visible from above as long as its distance from the frontal; nasals in contact behind the rostral; frontal longer than broad. Eye measuring about half the length of the ocular. Diameter of body 30 to 32 times in the total length. 17 scales round the middle of the body, 19 behind the head. Ventrals twice as large as the contiguous scales, 142–150. Subcaudals 7–9. End of tail flat above, obliquely truncate, with

strongly bi-, tri-, or quadricarinate scales; terminal scute with a transverse ridge and two points. Black above, uniform or closely spotted with yellow; belly orange, with alternating large black spots or cross bands; lower surface of tail black in the middle, orange on the sides.

Total length 350 millim.

Mountains of Southern India (Madura and Travancore).

- |                                      |                                  |   |
|--------------------------------------|----------------------------------|---|
| a-b. ♂ & yg. (V. 142, 149; C. 7, 8). | Cumbum Hills, Madura District.   | Col. Beddome [C.] (Types.)                    |
| c. ♂ (V. 150; C. 8).                 | Near Peermede, North Travancore. | Col. Beddome [C.] (Type of <i>S. picta</i> .) |
| d. ♂ (V. 150; C. 8).                 | High Range, Travancore.          | H. S. Ferguson, Esq. [P.]                     |

### 19. *Silybura rubromaculata*.

*Silybura rubromaculata*, *Beddome, Madras Quart. Journ. Med. Sc.* 1867, fig.; *Günth. Proc. Zool. Soc.* 1875, p. 229; *Theob. Cat. Rept. Brit. Ind.* p. 135 (1876); *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 14; *Bouleng. Faun. Ind., Rept.* p. 268 (1890).

Snout obtuse; rostral a little more than one fourth the length of the shielded part of the head, the portion visible from above as long as its distance from the frontal; nasals in contact; frontal a little longer than broad. Eye half or somewhat more than half the length of the ocular. Diameter of body 25 to 33 times in the total length. 17 scales round the middle of the body, 19 behind the head. Ventrals twice as broad as the contiguous scales, 127-136. Subcaudals 8-10. End of tail flat above, obliquely truncate, with strongly bi- or tricarinate scales; terminal scute with a transverse ridge and two more or less distinct points. Dark olive-brown, uniform above; lower parts variegated with yellow and red; some red blotches on each side of the anterior portion of the body, and one on each side of the tail near the vent.

Total length 340 millim.

Anamallays.

- |  |                                       |                            |
|--|---------------------------------------|----------------------------|
| a-c, d-e. ♂ (V. 132, 133, 127; C. 10, 9, 10) & ♀ (V. 136, 133; C. 8, 8). | Anamallays, above Ponachi, 4000 feet. | Col. Beddome [C.] (Types.) |
| f. ♂ (V. 128; C. 9).   | Anamallays, 4700 feet.                | W. Davison, Esq. [P.]      |

### 20. *Silybura arcticeps*.

*Silybura arcticeps*, *Günth. Proc. Zool. Soc.* 1875, p. 229, fig.; *Bouleng. Faun. Ind., Rept.* p. 268 (1890).

— *nilgherriensis*, var. *arcticeps*, part., *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 16.

Snout obtusely pointed; rostral about one fifth the length of the shielded part of the head, the portion visible from above measuring about half its distance from the frontal; nasals in contact; frontal



much longer than broad. Eye measuring hardly half the length of the ocular. Diameter of body 26 or 27 times in the total length. 17 scales round the middle of the body, 19 behind the head. Ventrals nearly twice as large as the contiguous scales, 128-130. Subcaudals 8. End of tail nearly flat above, obliquely truncate, with strongly bi- or tricarinate scales; terminal scute with a transverse ridge and two more or less distinct points. Brown above, with small yellowish dots; yellow inferiorly, with large black spots or cross bands.

Total length 200 millim.

Tinnevelly Hills, S. India.

*a-b*. Hgr. (V. 128, Tinnevelly, 3000-4000 feet. Col. Beddome [C.]  
130; C. 8, 8). (Types.)

### 21. *Silybura brevis*.

*Uropeltis ceylanicus*, *Cuv. R. A.* 2nd ed. ii. p. 76 (1829); *Cocteau*,  
*in Guér. Mag. Zool.*, Cl. iii. pl. ii. (1833).

*Pseudo-Typhlops ceylanicus*, *Schleg. Abbild.* p. 45 (1844).

*Coloburus ceylanicus*, *Dum. & Bibr.* vii. p. 164, pl. lix. fig. 3 (1854).

*Siloboura ceylonica*, *Gray, Proc. Zool. Soc.* 1858, p. 262.

*Silybura ceylonica*, *Peters, Uropelt.* p. 21 (1861).

— *ceylenica*, part., *Peters, Mon. Berl. Ac.* 1861, p. 903; *Günth.*  
*Proc. Zool. Soc.* 1875, p. 228.

— *brevis*, *Günth. Ann. & Mag. N. H.* (3) ix. 1862, p. 56, and *Rept.*  
*Brit. Ind.* p. 192, pl. xvii. fig. D (1864), and *Proc. Zool. Soc.* 1875,  
p. 229; *Theob. Cat. Rept. Brit. Ind.* p. 134 (1876); *Bouleng. Faun.*  
*Ind., Rept.* p. 268.

— *shortii*, *Beddome, Proc. Zool. Soc.* 1863, p. 225, pl. xxv. fig. 1;  
*Günth. Rept. Brit. Ind.* p. 191, pl. xxvii. fig. G; *Theob. l. c.*  
p. 134.

— *nilgherriensis*, *Beddome, l. c.* p. 226, pl. xxvi. fig. 1, and *Ann. &*  
*Mag. N. H.* (5) xvii. 1886, p. 14.

— *bicatenata*, *Günth. Rept. Brit. Ind.* p. 191, pl. xvii. fig. H, and  
*Proc. Zool. Soc.* 1875, p. 229; *Theob. Cat. Rept. Brit. Ind.* p. 134.

— *elliotti*, part., *Günth. Rept. Brit. Ind.* p. 190, and *Proc. Zool.*  
*Soc.* 1875, p. 228; *Theob. l. c.* p. 133; *Beddome, Ann. & Mag. N. H.*  
(5) xvii. 1886, p. 14.

— *elliotti*, vars. *shortii*, *annulata*, *Beddome, Ann. & Mag. N. H.*  
(5) xvii. p. 15.

Snout rounded; rostral hardly one fourth the length of the shielded part of the head, the portion visible from above shorter than its distance from the frontal; nasals in contact; frontal a little longer than broad. Eye more than half the length of the ocular. Diameter of body 21 to 29 times in the total length. 17 scales round the middle of the body, 19 behind the head. Ventrals twice as large as the contiguous scales, 120-146. Subcaudals 8-12. End of tail flat above, obliquely truncate, with strongly bi-, tri-, or quadricarinate scales; terminal scute with a transverse ridge and two more or less distinct points. Brown or blackish brown above, with or without yellowish spots or cross bars or a yellowish lateral stripe; belly yellowish, with or without dark brown spots, or



entirely brown; lower surface of tail brown or black in the middle, yellow on the sides.

Total length 450 millim.

Mountains of Southern India.

- |   |                               |   |
|---|-------------------------------|---|
| a. ♂ (V. 134; C. 11).   | Nilgherries.                  | Col. Beddome [C.]<br>(Type of <i>S. nilgherriensis</i> .) |
| b-c. ♀ (V. 144, 143; C. 8, 9).                                  | Nilgherries.                  | Col. Beddome [C.]   |
| d. ♂ (V. 142; C. 9).  | Nilgherries.                  |   |
| e. ♂ (V. 136; C. 10).   | Gudalur, Wynad,<br>3000 feet. | E. Pringle, Esq.<br>[P.]                                  |
| f. Yg. (V. 135; C. 9).  | Wynad, 3500 feet.             | Col. Beddome [C.]<br>(Type of <i>S. annulata</i> .)       |
| g. Yg. (V. 132; C. 9).  | Balarangams.                  | Col. Beddome [C.]   |
| h. ♂ (V. 125; C. 10).   | Pulney Hills.                 | Col. Beddome [C.]   |
| i. Hgr. (V. 122; C. 9).   | Anamallays.                   | Col. Beddome [C.]<br>(Type of <i>S. brevis</i> .)         |
| k-m, n. ♂ (V. 123, 127; C. 10, 9) & yg. (V. 132, 145; C. 9, 8). | Anamallays, 4000 feet.        | Col. Beddome [C.]   |
| o-r. ♂ (V. 146, 140, 142; C. 10, 11, 10) & hgr. (V. 140; C. 9). | Shevaroys.                    | Col. Beddome [C.]<br>(Type of <i>S. shortii</i> .)        |
| s. ♂ (V. 120; C. 9).  | High Range, Travancore.       | H. S. Ferguson, Esq.<br>[P.]                              |
| t. ♂ (V. 142; C. 10).   | Malabar.                      | Col. Beddome [C.]   |
| u. ♀, bad state.  | Malabar.                      | Col. Beddome [C.]   |
| v. ♂ (V. 135; C. 12).   | Deccan (?).                   | Col. Sykes [P.]<br>(Type of <i>S. bicatenata</i> .)       |

## 22. *Silybura macrolepis*.

*Silybura macrolepis*, Peters, *Mon. Berl. Ac.* 1861, p. 904; *Günth. Rept. Brit. Ind.* p. 189, pl. xvii, fig. B (1864); *Theob. Cat. Rept. Brit. Ind.* p. 132 (1876); *Beddome, Ann. & Mag. H.* (5) xvii. 1886, p. 24; *Bouleng. Faun. Ind., Rept.* p. 269 (1890).

Snout rounded; rostral not one fourth the length of the shielded part of the head, the portion visible from above shorter than its distance from the frontal; nasals in contact; frontal as broad as long or slightly longer than broad. Eye more than half the length of the ocular. Diameter of body 24 to 29 times in the total length. 15 scales round the middle of the body, 17 behind the head. Ventrals twice as large as the contiguous scales, 128-140. Subcaudals 7-9. End of tail flat above, obliquely truncate, with strongly bicarinate scales; terminal scute with a transverse ridge and two points. Black or dark purplish brown, each scale with a lighter edge; a short but broad yellow band on the lips and sides of neck, continued as a series of two to five large spots; a yellow band along each side of the tail.

Total length 295 millim.

Bombay Hills.

- a. ♀ (V. 140; C. 9). —♂ (Type.)  
 b-h. ♀ (V. 133, 131, 131; Matheran. Dr. Leith [P.].  
 C. 8, 9, 7) & yg. (V.  
 128, 128, 132, 130; C.  
 8, 8, 9).

#### 4. PSEUDOPLECTRURUS.

Plectrurus, part., *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 24.  
 Pseudoplectrurus, *Bouleng. Faun. Ind., Rept.* p. 270 (1890).

Eye small, in the ocular; no supraocular. Tail compressed, with the terminal scute compressed and with two superposed simple or bifid points.

Southern India.

##### 1. Pseudoplectrurus canaricus. (PLATE X. fig. 1.)

*Silybura canarica*, *Beddome, Madras Journ. Med. Sc.* 1870.

*Plectrurus canaricus*, *Günth. Proc. Zool. Soc.* 1875, p. 229; *Theob.*

*Cat. Rept. Brit. Ind.* p. 137 (1876); *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 27.

*Pseudoplectrurus canaricus*, *Bouleng. Faun. Ind., Rept.* p. 270 (1890).

Snout obtuse; rostral hardly one fourth the length of the shielded part of the head, the portion visible from above shorter than its distance from the frontal; nasals in contact; frontal longer than broad. Eye not half the length of the ocular. Diameter of body 32 to 43 times in the total length. 15 scales round the middle of the body, 19 behind the head. Ventrals not twice as large as the contiguous scales, 172-188. Subcaudals 6-13. Upper caudal scales smooth or feebly pluricarinata. Brownish violet, each scale usually paler in the centre; with or without small yellow spots on the back; lips yellow; some yellow blotches on each side of the anterior portion of the body; lower surface of tail yellow, with or without a black median streak.

Total length 430 millim.

Mountains of South Canara.

- a, b-e. ♂ (V. 180, 175, Kudra Mukh, near Col. Beddome [C.].  
 176; C. 11, 12, 13), ♀ Mangalore, 6000 (Types.)  
 (V. 185; C. 7), & yg. feet.  
 (V. 172; C. 12).  
 f-p. ♂ (V. 182, 175, 181, Kudra Mukh, 6200 E. Pringle, Esq. [P.].  
 178, 179; C. 11, 11, 12, feet.  
 12, 12), ♀ (V. 188; C.  
 7), & yg. (V. 176, 183,  
 182, 179; C. 11, 13, 12,  
 8).

#### 5. PLECTRURUS.

*Plectrurus*, *Dum. & Bibr. Exp. Gén.* vii. p. 166 (1854); *Peters, Uro-*  
*pelt.* p. 22 (1861); *Günth. Rept. Brit. Ind.* p. 192 (1864); *Bouleng.*  
*Faun. Ind., Rept.* p. 270 (1890).

*Maudia*, *Gray, Proc. Zool. Soc.* 1858, p. 261.

*Plectrurus*, part., *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 24.

Eye in the ocular shield. No mental groove. A supraocular; no temporal. Tail compressed, the terminal scute compressed and with two superposed, simple, bifid or trifid points.

Southern India.

*Synopsis of the Species.*

I. Eye not quite half the length of the ocular shield; terminal caudal scute with two superposed simple points.

Ventrals 152-168..... 1. *perroteti*, p. 161.  
Ventrals 180..... 2. *davisonii*, p. 162.

II. Eye half the length of the ocular; terminal caudal scute with two superposed bi- or tricuspid transverse ridges.

Ventrals not twice as broad as contiguous scales ..... 3. *guentheri*, p. 162.  
Ventrals twice as broad as contiguous scales. 4. *aureus*, p. 162.

1. *Plectrurus perroteti*.

*Plectrurus perroteti*, *Dum. & Bibr.* vii. p. 167, pl. lix. fig. 4 (1854); *Gray, Proc. Zool. Soc.* 1858, p. 265; *Günth. Rept. Brit. Ind.* p. 193 (1864), and *Proc. Zool. Soc.* 1875, p. 230; *Jan, Icon. Gén.* 1. 9, pl. ii. fig. 7 (1865); *Theob. Cat. Rept. Brit. Ind.* p. 136 (1876); *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 25; *Bouleng. Faun. Ind., Rept.* p. 271 (1890).

Snout obtuse; rostral small, the portion visible from above shorter than its distance from the frontal; nasals in contact; frontal longer than broad. Eye hardly half the length of the ocular. Diameter of body 30 to 38 times in the total length. 15 scales round the middle of the body, 17 behind the head. Ventrals not quite twice as large as the contiguous scales, 152-168. Subcaudals 7-12. Caudal scales more or less distinctly pluricarinate; terminal scute with two superposed single points. Brown or purplish, uniform, or each scale edged with darker; young pale brown, with darker longitudinal lines.

Total length 330 millim.

Nilgherries and Anamallays, 4000-8000 feet.

<i>a-b.</i> ♂ (V. 156; C. 12)	Nilgherries.	T. C. Jerdon, Esq. [P.].
& ♀ (V. 164; C. 7).		
<i>c.</i> ♀ (V. 158; C. 8).	Nilgherries.	Zoological Society.
<i>d-e.</i> Yg. (V. 161, 168;	Kotagiri, Nil-	Dr. J. R. Henderson
C. 8, 8).	gherries.	[P.].
<i>f-k.</i> ♂ (V. 156, 156, 152,	Anamallays, 4700	W. Davison, Esq. [P.].
158; C. 10, 11, 11, 10)	feet.	
& ♀ (V. 161; C. 7).		
<i>l, m.</i> ♀ (V. 154, 159;	Anamallays.	Col. Beddome [C.].
C. 8, 7).		
<i>n-q.</i> Yg. (V. 164, 164, 157,	Wynad.	Col. Beddome [C.].
155; C. 8, 8, 9, 10).		
<i>r, s.</i> ♀ (V. 157; C. 8) &	Malabar.	Col. Beddome [C.].
yg. (V. 165; C. 11).		

2. *Plectrurus davisonii*. (PLATE X. fig. 2.)

*Plectrurus davidsoni*, *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 25; *Bouleng. Faun. Ind., Rept.* p. 271 (1890).

May eventually have to be united with *P. perroteti*, from which it differs only in the somewhat more elongate body (39 times the diameter), the higher number of ventrals (180), and the brighter coloration. Yellow, each scale edged with purple.

Total length 430 millim.

Anamallays.

a. ♀ (V. 180; C. 8). Anamallays, 4700 feet. W. Davison, Esq. [P.]  
(Type.)

3. *Plectrurus guentheri*.

*Plectrurus guentheri*, *Beddome, Proc. Zool. Soc.* 1863, p. 228, pl. xxvii.; *Günth. Rept. Brit. Ind.* p. 193 (1864); *Theob. Cat. Rept. Brit. Ind.* p. 136 (1876); *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 26; *Bouleng. Faun. Ind., Rept.* p. 271 (1890).

Snout obtuse; rostral small, the portion visible from above shorter than its distance from the frontal; nasals in contact; frontal longer than broad. Eye half the length of the ocular. Diameter of body 36 to 42 times in the total length. 15 scales round the middle of the body, 17 behind the head. Ventrals not twice as large as the contiguous scales, 171–175. Subcaudals 10–12 (♂). Caudal scales pluricarinate; terminal scute with two superposed bi- or tricuspid transverse ridges. Bright reddish purple above, this colour descending as triangular processes to the sides, which, like the belly, are yellow; these triangular markings sometimes extending across the belly.

Total length 360 millim.

Nilgherry Hills, 3500–4000 feet.

a. ♂ (V. 174; C. 12). Walagut, below Sispara. Col. Beddome [C.]  
(Type.)

b, c. ♂ (V. 171, 175; Walagut. Col. Beddome [P.]  
C. 10, 12).

4. *Plectrurus aureus*. (PLATE X. fig. 3.)

*Plectrurus aureus*, *Beddome, Proc. Zool. Soc.* 1880, p. 182, and *Ann. & Mag. N. H.* (5) xvii. 1886, p. 26; *Bouleng. Faun. Ind., Rept.* p. 272 (1890).

Very closely allied to the preceding, the only structural difference being found in the ventrals, which are a little broader, viz., twice as broad as the contiguous scales. Diameter of body 39 to 44 times in the total length. Ventrals 164–177; subcaudals 8–12. Of a brilliant golden colour, brighter beneath; the scales edged with violet, with or without a few irregular narrow violet-black cross bars on the back; the belly much ornamented with violet-black cross bands or alternating spots.



Total length 400 millim.  
Wynad (Chambra Hill).

a. ♂ (V. 164; C. 12).	Chambra Hill.	Col. Beddome [C.] (Type.)
b-c. ♂ (V. 170; C. 11) & ♀ (V. 177; C. 8).	Chambra Hill.	Col. Beddome [C.]

### 6. MELANOPHIDIUM.

Melanophidium, *Günth. Rept. Brit. Ind.* p. 193 (1864); *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 29; *Bouleng. Faun. Ind., Rept.* p. 272 (1890).

Eye in the ocular shield. A median groove along the chin. No supraocular; no temporal. Tail cylindrical or slightly compressed, the terminal scute pointed or with one or two vertical ridges. Palatine teeth present.

Southern India.

#### *Synopsis of the Species.*

- I. Suture between the ocular and the frontal more than one third the length of the latter shield. 1. *wynadense*, p. 163.
- II. Suture between the ocular and the frontal less than one third the length of the latter shield.

Ventrals and subcaudals black, edged with white .....	2. <i>punctatum</i> , p. 164.
Ventrals black, subcaudals white .....	3. <i>bilineatum</i> , p. 164.

#### 1. *Melanophidium wynadense*.

*Plectrurus wynadensis*, *Beddome, Proc. Zool. Soc.* 1863, p. 228.  
*Melanophidium wynadense*, *Günth. Rept. Brit. Ind.* p. 194, pl. xvii. fig. 3 (1864); *Theob. Cat. Rept. Brit. Ind.* p. 138 (1876); *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 30; *Bouleng. Faun. Ind., Rept.* p. 272 (1890).

Snout rounded; rostral small, just visible from above; frontal as long as its distance from the end of the snout; suture between the ocular and the frontal more than one third the length of the latter shield. Eye very small. Diameter of body 44 to 48 times in the total length. 15 scales round the middle of the body, 17 or 19 behind the head. Ventrals rather more than twice the size of the contiguous scales, 176-185. Subcaudals 10-15. Black, beautifully iridescent, uniform or with large yellow spots on the belly.

Total length 445 millim.

Wynad, Malabar, 3000-5000 feet.

a. ♀ (V. 185; C. 11).	Near Manantoddy.	Col. Beddome [C.] (Type.)
b, c. ♀ (V. 185, 176; C. 11, 12).	Near Manantoddy.	Col. Beddome [C.]



## 2. *Melanophidium punctatum*.

*Melanophidium punctatum*, *Beddome, Madras Monthly Journ. Med. Sc.* 1871; *Günth. Proc. Zool. Soc.* 1875, p. 230, pl. xxxii fig. B; *Theob. Cat. Rept. Brit. Ind.* p. 139 (1876); *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 31; *Bouleng. Faun. Ind., Rept.* p. 273 (1890).

Snout rounded; rostral small, just visible from above; frontal as long as or longer than its distance from the end of the snout; suture between the ocular and the frontal less than one third the length of the latter shield. Eye very small, still smaller than in *M. wynadense*. Diameter of body 42 to 48 times in the total length. 15 scales round the middle of the body, 17 behind the head. Ventrals rather more than twice as broad as the contiguous scales, 183-198. Subcaudals 15-18. Black above, beautifully iridescent; ventrals and the two lower series of scales on each side with a broad white border.

Total length 550 millim.

Travancore Hills, 4000-4500 feet.

<i>a, b-c.</i> ♂ (V. 198, 194, 189; C. 15, 18, 16).	Travancore.	Col. Beddome [C.] (Types.)
<i>d-e.</i> ♂ (V. 184; C. 16) & yg. (V. 191; C. 16).	Travancore.	Col. Beddome [C.].
<i>f.</i> ♂ (V. 183; C. 17).	Peeramad, Travancore, 4000 feet.	G. E. Mason, Esq. [P.].

## 3. *Melanophidium bilineatum*.

*Melanophidium bilineatum*, *Beddome, Madras Monthly Journ. Med. Sc.* 1870; *Günth. Proc. Zool. Soc.* 1875, p. 230, pl. xxxii. fig. A; *Theob. Cat. Rept. Brit. Ind.* p. 138 (1876); *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 30; *Bouleng. Faun. Ind., Rept.* p. 273 (1890).

Snout rounded; rostral small, just visible from above; frontal longer than its distance from the end of the snout; suture between the ocular and the frontal less than one third the length of the latter shield. Eye very small. Diameter of body 40 to 50 times in the total length. 15 scales round the middle of the body, 17 or 19 behind the head. Ventrals rather more than twice as broad as the contiguous scales, 188-200. Subcaudals 15-17. Black, beautifully iridescent; a broad yellow band, with or without a series of black dots, along each side, from the lips to the tail, where it unites with its fellow on the under surface.

Total length 360 millim.

Wynad, Malabar, 4000 feet.

<i>a.</i> ♂ (V. 188; C. 15).	Wynad.	Col. Beddome [C.] (Type.)
<i>b-c.</i> ♂ (V. 192; C. 15) & yg. (V. 200; C. 17).	Wynad.	Col. Beddome [C.].

## 7. PLATYPLECTRURUS.

Platyplectrurus, *Günth. Ann. & Mag. N. H.* (4) i. 1868, p. 414; *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 31; *Bouleng. Faun. Ind., Rept.* p. 273 (1890).  
Teretrurus, *Beddome, l. c.* p. 28.

Eye distinct from the neighbouring shields, of moderate size. A supraocular and a temporal. Tail cylindrical or slightly compressed, the terminal scute pointed or with a transverse ridge.

Southern India.

*Synopsis of the Species.*

- Snout broadly rounded; supraoculars longer than the præfrontals; 163-175 ventrals 1. *trilineatus*, p. 165.  
Snout broadly rounded; supraoculars as long as the præfrontals; 150-175 ventrals 2. *madurensis*, p. 166.  
Snout obtuse; supraoculars as long as or shorter than the præfrontals; 120-150 ventrals ..... 3. *sanguineus*, p. 166.

1. *Platyplectrurus trilineatus*. (PLATE XI. fig. 1.)

*Platyplectrurus trilineatus*, *Beddome, Madras Quart. Journ. Med. Sc.* 1867, p. 14, fig.; *Theob. Cat. Rept. Brit. Ind.* p. 137 (1876).

*Platyplectrurus trilineatus*, *Günth. Ann. & Mag. N. H.* (4) i. 1868, p. 413; *Beddome, Ann. & Mag. N. H.* (5) xvii. 1886, p. 32; *Bouleng. Faun. Ind., Rept.* p. 274 (1890).

— *bilineatus*, *Beddome, l. c.* p. 33.

Snout broadly rounded; rostral small, visible from above; frontal longer than broad; supraocular much larger than the eye, longer than the præfrontals; temporal two thirds or three fifths the length of the parietals. Diameter of body 37 to 50 times in the total length. 15 scales round the middle of the body, 17 behind the head. Ventrals nearly twice as broad as the contiguous scales, 163-175. Subcaudals 8-16. Caudal scales smooth or a few of the terminal ones inconspicuously bi- or tricarinate; terminal scute with a transverse ridge which is hardly distinct in the female. Adult reddish brown or brick-red above, with three continuous or interrupted black longitudinal lines; young dark brown or black above, with two or more yellowish dorsal stripes, yellowish below, each scale with a brown dot.

Total length 400 millim.

Anamallays.

- |  |                      |                              |
|--|----------------------|------------------------------|
| a. ♂ (V. 165; C. 16).  | Anamallays, 4000 ft. | Col. Beddome [C.]<br>(Type.) |
| b-d. ♂ (V. 168; C. 14),<br>♀ (V. 173; C. 10), &<br>hgr. (V. 163; C. 14). | Anamallays, 4000 ft. | Col. Beddome [C.].           |
| e-g. ♂ (V. 166; C. 14)<br>& ♀ (V. 175, 165;<br>C. 8, 9).                 | Anamallays, 4700 ft. | W. Davison, Esq.<br>[P.].    |

- h-i.* Yg. (V. 164, 163; Madras Hills. Col. Beddome [C.]  
C. 14, 13). (Types of *P. bilineatus*.)  
*k-l.* Yg. (V. 162, 168; Devacolum, Travancore Hills. Col. Beddome [C.]  
C. 11, 10).

### 2. *Platyplectrurus madurensis*. (PLATE XI. fig. 2.)

*Platyplectrurus madurensis*, *Beddome, Proc. Zool. Soc.* 1877, p. 167,  
*and Ann. & Mag. N. II.* (5) xvii. 1886, p. 33; *Bouleng. Faun. Ind.*,  
*Rept.* p. 274 (1890).

Very closely allied to the preceding, but head-shields rather shorter and supraoculars not longer than the præfrontals. Diameter of body 38 to 42 times in the total length. Ventrals 158-175; subcaudals 10-15. In one of the specimens the temporal is anomalously fused with the fourth labial. Above a nacreous purplish brown; ventrals and the two adjoining series of scales on each side white in the centre, purplish brown on the borders.

Total length 350 millim.

Pulney and Travancore Hills (4000-6000 feet).

- a, b-d.* ♂ (V. 158; C. 15) & Pulney Hills, 6000 ft. Col. Beddome [C.]  
♀ (V. 170, 175, 165; C. 11, (Types.)  
10, 10).

### 3. *Platyplectrurus sanguineus*.

*Plectrurus sanguineus*, *Beddome, Madras Quart. Journ. Med. Sc.*  
1867, p. 14, fig.; *Theob. Cat. Rept. Brit. Ind.* p. 136 (1876).

*Platyplectrurus hewstoni*, *Beddome, Proc. Zool. Soc.* 1876, p. 701.

*Plectrurus scabricauda*, *Theob. l. c.*

*Teretrurus sanguineus*, *Beddome, Ann. & Mag. N. II.* (5) xvii. 1886,  
p. 28.

— *travancoricus*, *Beddome, l. c.* p. 29.

*Platyplectrurus sanguineus*, *Bouleng. Faun. Ind., Rept.* p. 274 (1890).

Snout obtuse; rostral small, visible from above; frontal longer than broad; supraocular not or scarcely larger than the eye, as long as or shorter than the præfrontals; temporal about half the length of the parietals. Diameter of the body 22 to 28 times in the total length. 15 scales round the middle of the body, 17 behind the head. Ventrals nearly twice as broad as the contiguous scales, 120-150. Subcaudals 5-10. Caudal scales smooth or faintly keeled in the females; all the caudals and the last ventrals more or less distinctly pluricarinate in the males; tail ending in a simple compressed point. Brown or purplish red above; belly red, uniform or more or less blotched with black.

Total length 220 millim.

Anamallays, Wynad, and Travancore Hills (3000-4700 feet).

- a-f.* ♂ (V. 128; C. 9), ♀ Anamallays, 4000 ft. Col. Beddome [C.]  
(V. 136, 147, 131; C. 6, (Types.)  
8, 6), & yg. (V. 135,  
150; C. 9, 8).

<i>g-h.</i> Yg. (V. 142, 120; C. 8, 8).	Anamallays.	Col. Beddome [C.].
<i>i-k.</i> ♀ (V. 147, 149; C. 7, 8).	Anamallays, 4700 ft.	W. Davison, Esq. [P.].
<i>l.</i> ♀ (V. 123; C. 5).	Wynad, 3000 ft.	Col. Beddome [C.]. (Type of <i>P. hewstoni</i> .)
<i>m.</i> ♀ (V. 127; C. 7).	Wynad.	Col. Beddome [C.].
<i>n-g.</i> ♂ (V. 132; C. 8) & ♀ (V. 135, 135, 130; C. 6, 7, 7).	Travancore hills, 3000-4000 ft.	Col. Beddome [C.]. (Types of <i>T. travancoricus</i> .)
<i>r-l.</i> Hgr. (V. 139, 147; C. 10, 10) & yg. (V. 150; C. 10).	High range of Travancore Hills.	H. S. Ferguson, Esq. [P.].

## Fam. 6. XENOPELTIDÆ.

Imbricatæ, part., *Boie, Isis*, 1827, p. 510.

Aglyphodontes Holodontiens, part., *Duméril, Mém. Ac. Sc. xxiii.* p. 424, 1853.

Tortricidæ, part., *Jan, Elenco sist. Ofid.* p. 18, 1863.

Xenopeltidæ, *Cope, Proc. Ac. Philad.* 1864, p. 230.

Xenopeltidæ, *Günther, Rept. Brit. Ind.* p. 180, 1864.

Xenopeltidæ, *Cope, Proc. Am. Phil. Soc.* xxiii. p. 482, 1886.

Xenopeltidæ, *Boulenger, Faun. Ind., Rept.* p. 275, 1890.

Cranial bones more or less solidly united; transpalatine present; pterygoid extending to quadrate; supratemporal present, suspending quadrate; præfrontal in contact with nasal. Mandible without coronoid bone. Teeth in jaws, palate, and præmaxillary.

A single genus, inhabiting South-eastern Asia.

## 1. XENOPELTIS.

*Xenopeltis*, *Reinw. in Boie, Isis*, 1827, p. 564; *Dum. & Bibr. Erp. Gén.* vii. p. 28 (1854); *Günth. Rept. Brit. Ind.* p. 180 (1864); *Jan, Icon. Gén.* p. 57 (1865); *Bouleng. Faun. Ind., Rept.* p. 276 (1890).

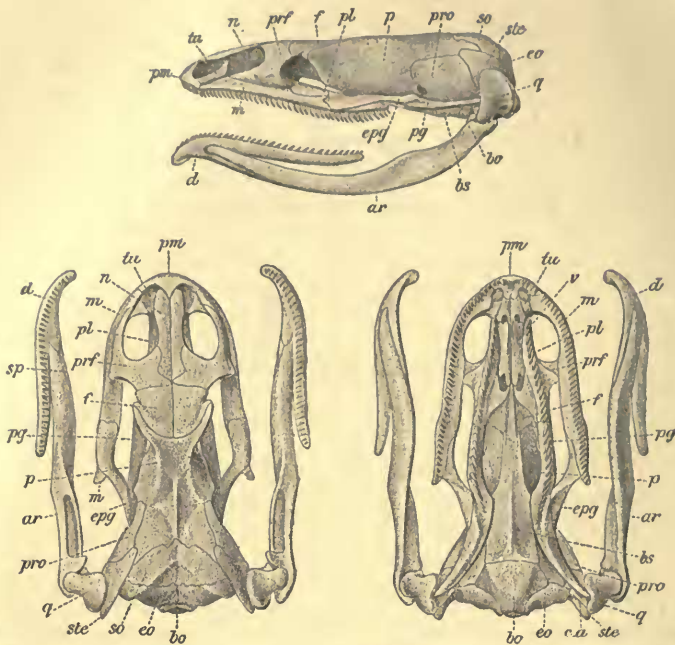
*Tortrix*, part., *Schleg. Phys. Serp.* ii. p. 1 (1837).

Teeth small, equal, closely set, and very numerous (4 on each side of the præmaxillary, 33-38 in each maxillary, 35 or 36 in each ramus of the mandible). Dentary bone attached loosely to the apex of the articular and movable on it. Head not distinct from neck; eye small, with vertically elliptic pupil. Nostril between two small nasals; frontal in contact with a large agygous interparietal shield, which is in the middle between four parietals. A mental groove. Body cylindrical; scales smooth, in 15 rows; ventrals large; tail short, subcaudals in two rows.

South-eastern Asia.



Fig. 10.

Skull of *Xenopeltis unicolor*.

### 1. *Xenopeltis unicolor*.

*Xenopeltis unicolor*, *Reinw. in Boie, Isis*, 1827, p. 564; *Cantor, Cat. Mal. Rept.* p. 54 (1847); *Dum. & Bibr.* vii. p. 28 (1854); *Günth. Rept. Brit. Ind.* p. 180 (1864); *Jan, Icon. Gén.* p. 57, l. 9, pl. v. (1865); *Theob. Cat. Rept. Brit. Ind.* p. 140 (1876); *Bouleng. Faun. Ind., Rept.* p. 276, fig. (1890).

— concolor, *Reinw. l. c.*

— leucocephala, *Reinw. l. c.*

*Tortrix xenopeltis*, *Schleg. Phys. Serp.* ii. p. 20, pl. i. figs. 8-10, and *Abbild.* pl. xxxv. (1844).

Head much depressed, snout rounded; frontal as long as its distance from the rostral; supraocular small, smaller than the upper postocular; a single large præocular or loreal shield; two postoculars, upper largest; eight upper labials, first in contact with the internasal, fourth and fifth entering the eye; a pair of very small chin-shields, in contact with the three anterior lower labials. Scales in 15 rows. Ventrals 166-193; anal divided; subcaudals 26-31. Black or brown above, highly iridescent, scales with lighter edges, white beneath; head whitish in the young.

Total length 1000 millim.; tail 100.

S. India, Burma, Indo-China, Malay Peninsula and Archipelago.



a. Ad. (V. 190 ; C. 29).	Siam.	Sir R. Schomburgk [P.].
b. Ad. (V. 190 ; C. 29).	Siam.	
c. Ad. (V. 178 ; C. 31).	Singapore.	Dr. Dennys [P.].
d. Yg., bad state.	Pinang.	Dr. Cantor.
e-f. Ad. & hgr. (V. 176, 179 ; C. 29, 29).	Nias.	Hr. Sundermann [C.].
g. Ad. (V. 184 ; C. 31).	Borneo.	H. Low, Esq. [P.].
h. Ad. (V. 181 ; C. 28).	Borneo.	Sir J. Brooke [P.].
i, k. Ad. & hgr. (V. 191, 166 ; C. 30, 28).	Celebes.	
l. Yg. (V. 173 ; C. 30).	— ?	Haslar Hospital.
m. Ad., skel.	— ?	Lieut. Bevan [P.].
n. Skull.	Java.	

Fam. 7. COLUBRIDÆ.

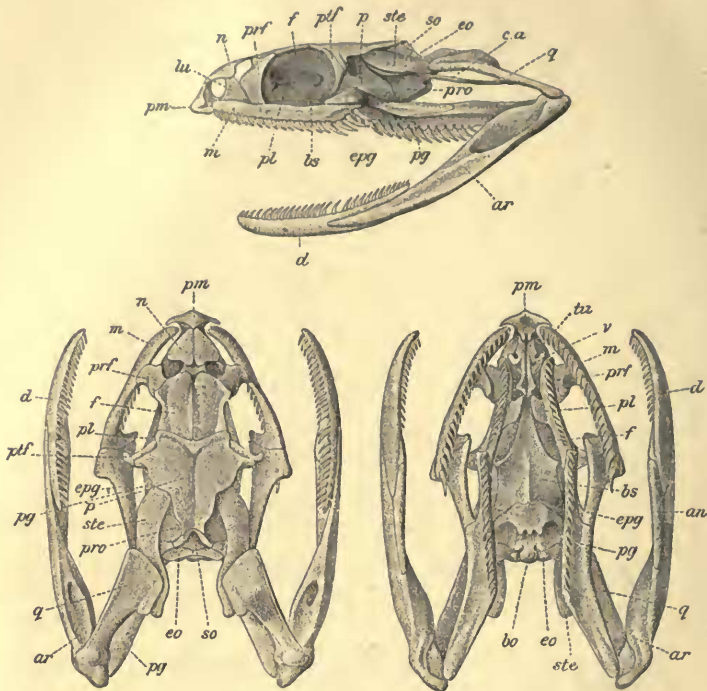
- Hydri, Pseudoviperæ, Colubriini, *Oppel, Ordn. Rept.* p. 49, 1811.  
 Colubroidea, Bungaroidea, Viperoides, part., *Fitzinger, Neue Classif. Rept.* p. 11, 1826.  
 Macrostomata, part., (Oligodonta, Isodonta, part., Heterodonta, Amphibola, Antiochalina, part., Holochalina, part.), *J. Müller, Zeitschr. f. Physiol.* iv. p. 270, 1831.  
 Hydridæ, part., Colubridæ, part., *Gray, Cat. Sn.* p. 2, 1849.  
 Aglyphodontes, part., Opisthoglyphes, Protéroglyphes, *Duméril, Mém. Ac. Sc.* xxiii. p. 419, 1853; *Duméril & Bibron, Erp. Gén.* vii. 1854.  
 Asinea, part. (Glyphodonta, Colubrina, Calamarina, Acrochordina), *Stannius, Zoot. Amph.* p. 5, 1856.  
 Colubrinæ, part., *Günther, Cat. Col. Sn.* p. 1, 1858.  
 Asinea, part., Proteroglypha, *Cope, Proc. Ac. Philad.* 1864, p. 230.  
 Colubriiformes, part., Colubriformes venenosi, *Günther, Rept. Brit. Ind.* pp. 168 & 337, 1864.  
 Asinea, part. (Acrochordidæ, Nothopidæ, Colubridæ, part., Acontiophidæ), Proteroglypha, *Cope, Proc. Amer. Philos. Soc.* xxiii. p. 479, 1886.  
 Colubridæ, *Boulenger, Faun. Ind., Rept.* p. 234, 1890.

Facial bones movable; præfrontal not in contact with nasal; transpalatine present; pterygoid extending to mandible or quadrate; supratemporal present, attached scale-like to the skull and suspending quadrate; maxillary horizontal, not movable perpendicularly to the transpalatine. Mandible without coronoid bone. Both jaws toothed.

Divided into three parallel series :—

- A. AGLYPHA.—All the teeth solid, not grooved.  
 B. OPISTHOGLYPHA.—One or more of the posterior maxillary teeth grooved.  
 C. PROTEROGLYPHA.—Anterior maxillary teeth grooved or “perforated.”

Fig. 11.

Skull of *Tropidonotus natrix*.

## Series A. AGLYPHA.

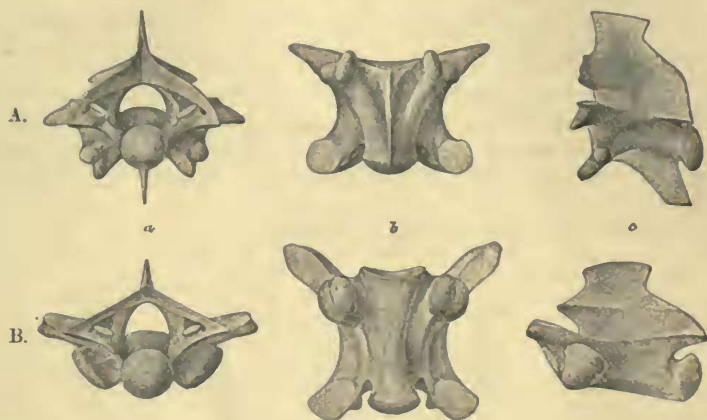
Divided into three subfamilies:—

1. *Acrochordinæ*.—The postfrontal bone produced over the supra-orbital region. Scales not or but slightly imbricate.
2. *Colubrinæ*.—Postfrontal bone not produced over the supra-orbital region. Scales usually imbricate. Teeth on the entire length of the maxillary and dentary bones.
3. *Rhachiodontinæ*.—Teeth rudimentary; maxillary and dentary bones edentulous anteriorly.

Beyond these three subfamilies I am unable to divide the Aglyphous *Colubridæ* into groups (higher than genera) that may be regarded as natural and capable of definition. I have, however, arranged the genera of *Colubrinæ* in two series according to the presence or absence of hypapophyses or hæmal processes on the posterior dorsal vertebræ. This point (see fig. 12) is easily ascertained by making an incision along the belly in the posterior fifth of the body, pushing aside the viscera, and disarticulating the

rhachis by bending the body dorsally. The application of this character, first employed for taxonomic purposes by Prof. Cope, but which had not hitherto been tested in a thorough manner, leads to some unexpected results as to the affinities of many genera and species the position of which appeared somewhat problematical. Thus all the Madagascar *Colubrina* have the hypapophyses developed throughout the vertebral column, and thus differ from the

Fig. 12.



Posterior dorsal vertebræ of:—

A. *Lioheterodon madagascariensis*. B. *Heterodon nasicus*.  
a. Back view. b. Lower view. c. Side view.

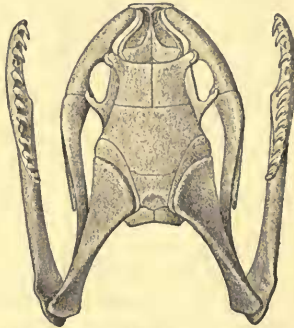
American genera *Liophis*, *Heterodon*, *Dromicus*, &c., with which they have long been associated, although, indeed, a careful comparison of their external structure alone shows these views to have been based merely upon very superficial resemblances. As regards those dwarfed, degraded forms which have hitherto been associated as *Calamariidæ*, I have endeavoured, as far as possible, to bring them into nearer neighbourhood to such more powerful Snakes, from which, so far as the value of their characters can be correctly estimated, there is reason to believe they are derived. Thus *Haldea* and *Streptophorus* are placed near *Tropidonotus* and allies, as proposed by Cope, *Simotes* and *Oligodon* near *Coronella*, and so on; in the same way as in the family *Boiidae* the genera *Eryx*, *Lichanura*, *Charina*, *Bolieria*, and *Erebophis* have been incorporated among the Boas, and *Loxocemus* and *Calabaria* among the Pythons instead of being grouped together as "*Erycidæ*." In the case of the Boas the course followed is so obviously in accordance with the spirit of a natural classification, that I do not anticipate any objection being raised against it. It has been my aim to carry out the same principle in dealing with the large and far more difficult group of the *Colubridæ*.

Subfam. 1. *ACROCHORDINÆ*.Hydrophidæ, part., *Boie, Isis*, 1827, p. 510.Hydridæ, part. (Achrochordina, Xenodermina), *Gray, Cat. Sn.* p. 35, 1849.Acrochordiens, *Duméril, Mém. Ac. Sc.* xxiii. p. 435, 1853; *Duméril & Bibron, Erp. Gén.* vii. p. 32, 1854.Acrochordidæ, *Jan, Elenco sist. Ofid.* p. 106, 1863.Acrochordidæ, *Cope, Proc. Ac. Philad.* 1864, p. 231.Acrochordidæ, *Günther, Rept. Brit. Ind.* p. 335, 1864.Nothopidæ, *Cope, Proc. Ac. Philad.* 1871, p. 202.Acrochordidæ, Nothopidæ, *Cope, Proc. Amer. Philos. Soc.* xxiii. p. 484, 1886.Acrochordinæ, *Boulenger, Faun. Ind., Rept.* p. 354, 1890.

Postfrontal bone produced over the supraorbital region. Maxillary and dentary bones armed with solid teeth along their whole length; palatines and pterygoids toothed. Hypapophyses developed throughout the vertebral column. Scales not or but slightly imbricate.

South-eastern Asia and Central America.

Fig. 13.

Skull of *Chersydrus granulatus*.*Synopsis of the Genera.*

- I. No ventral shields; head covered with uniform granules.  
 Body scarcely compressed ..... 1. *Acrochordus*, p. 173.  
 Body and tail compressed, with a fold below.  
 2. *Chersydrus*, p. 173.
- II. Ventral shields well developed; head covered with uniform granules ..... 3. *Xenodermus*, p. 175.
- III. Ventral shields well developed; head with symmetrical shields.  
 Subcaudals single; præfrontal and supraocular shields present.  
 4. *Stoliczkaia*, p. 175.  
 Subcaudals in two rows; no præfrontal or supraocular shields.  
 5. *Nothopsis*, p. 176.



## 1. ACROCHORDUS.

Acrochordus, *Hornstedt, Abh. Acad. Stockholm*, viii. 1787, p. 307; *Daud. Rept.* vii. p. 388 (1803); *Gray, Cat. Sn.* p. 61 (1849); *Dum. & Bibr. Erp. Gén.* vii. p. 34 (1854); *Günth. Rept. Brit. Ind.* p. 335 (1864).

Acrochordus, part., *Schleg. Phys. Serp.* ii. p. 424 (1837).

Potamophis, part., *Schmidt, Abh. Naturw. Hamb.* ii. 1852, p. 75.

Teeth subequal, about 15 in each maxillary. Head not distinct from neck, small, covered with granular juxtaposed scales; nostrils close together on the top of the snout; eye very small, with vertically subelliptic pupil. Body stout, slightly compressed; scales very small, tubercular, spinose; no ventral shields. Tail short, subcylindrical, prehensile.

Malay Peninsula and Archipelago; New Guinea.

1. *Acrochordus javanicus*.

*Acrochordus javanicus*, *Hornstedt, Abh. Acad. Stockh.* viii. 1787, p. 307, pl. xii.; *Shaw, Nat. Miscell.* v. pl. cxlviii. (—?); *Daud. Rept.* vii. p. 390, pl. lxi. fig. 42 (1803); *Schleg. Phys. Serp.* ii. p. 428 (1837), and *Abbild.* pl. xvii. figs. 12–14 (1839); *Cantor, Cat. Mal. Rept.* p. 58 (1847); *Gray, Cat.* p. 62 (1849); *Dum. & Bibr. Erp. Gén.* vii. p. 35 (1854); *Jan, Icon. Gén.* 1, pl. iv. (1860); *Günth. Rept. Brit. Ind.* p. 336 (1864); *F. Müll. Verh. nat. Ges. Basel*, viii. 1887, p. 267.

— dubius, *Shaw, Zool.* iii. p. 575, pl. cxxix. (1802).

*Potamophis javanica*, *Schmidt, Abh. Naturw. Hamb.* ii. 1852, p. 75.

Head-scales very small, rough, larger and flat towards the mouth; no shields of any kind. About 120 scales round the body, dorsals largest. Brown or olive above, more or less distinctly spotted, striped, or marbled with black; lighter beneath.

Total length 1300 millim.; tail 180.

Malay Peninsula, Java, New Guinea.

<i>a, b.</i> Yg.	Pinang.	Dr. Cantor.
<i>c.</i> Ad., stffd.	E. Indies.	E. India Company.
<i>d, e.</i> Many yg.	E. Indies.	E. India Company.
<i>f, g.</i> Yg.	E. Indies.	Gen. Hardwicke [P.].
<i>h.</i> ♂.	Java.	Dr. Bleeker.
<i>i.</i> ♂.	Java.	A. Scott, Esq. [P.].
<i>k-m.</i> ♀, hgr., & yg.	Fly River, New Guinea.	Rev. S. Macfarlane [C.].

## 2. CHERSYDRUS.

Hydrus, part., *Schneid. Hist. Amph.* i. p. 233 (1790).

*Chersydrus*, *Cuv. Règne Anim.* ii. p. 75 (1817); *Gray, Cat. Sn.* p. 60 (1849); *Dum. & Bibr. Erp. Gén.* vii. p. 40 (1854); *Günth. Rept. Brit. Ind.* p. 336 (1864); *Bouleng. Faun. Ind., Rept.* p. 355 (1890).



Acrochordus, part., *Schleg. Phys. Serp.* ii. p. 424 (1837).

Potamophis, part., *Schmidt, Abh. Naturw. Hamb.* ii. 1852, p. 75.

Teeth subequal, 12 to 15 in each maxillary. Head not distinct from neck, small, covered with granular, juxtaposed scales; nostrils close together on the top of the snout; eye very small, with vertically subelliptic pupil. Body stout, compressed; scales very small, juxtaposed, rhomboidal, with a short tubercle-like keel, spinose on the belly; no ventral shields; a fold of the skin running along the median line of the abdomen. Tail short, compressed, prehensile, scaled like the body.

Mouths of rivers and coasts of South-eastern Asia and Papuasia.

### 1. *Chersydrus granulatus*.

*Hydrus granulatus*, *Schneid. Hist. Amph.* i. p. 243 (1799).

*Acrochordus fasciatus*, *Shaw, Zool.* iii. p. 576, pl. cxxx. (1802);

*Schleg. Phys. Serp.* ii. p. 429, pl. xiv. figs. 14-16 (1837).

*Pelamis granulatus*, *Daud. Rept.* vii. p. 370 (1803).

*Acrochordus granulatus*, *Cantor, Cat. Mal. Rept.* p. 59 (1847).

*Chersydrus granulatus*, *Gray, Cat.* p. 61 (1849); *Günth. Rept. Brit.*

*Ind.* p. 336 (1864); *Theob. Cat. Brit. Ind.* p. 186 (1876);

*Bouleng. Faun. Ind., Rept.* p. 355, fig. (1890).

— *annulatus*, *Gray, l. c.*

*Potamophis fasciata*, *Schmidt, Abh. Naturw. Hamb.* ii. 1852, p. 75.

*Chersydrus fasciatus*, *Dum. & Bibr.* vii. p. 41 (1854).

No rostral shield; a series of slightly enlarged shields on each lip, separated from the oral border by a series of minute scales; no chin-shields. About 100 scales round the body, dorsals largest. Dark olive or blackish, with pale cross bands or annuli, which may become indistinct in the adult.

Total length 1000 millim.; tail 100.

From Southern India and Cochin China to New Guinea.

<i>a-b.</i> Hgr. ♀.	Madras.	T. C. Jerdon, Esq. } [P.]	(Types of <i>C.</i> <i>annulatus</i> .)
<i>c.</i> Yg.	Madras.	J. E. Boileau, Esq. } [P.]	
<i>d-e.</i> Hgr.	Ceylon.		
<i>f.</i> ♀.	Bassein R., Burma.	W. Theobald, Esq. [C.].	
<i>g.</i> ♀.	Pinang.	Dr. Cantor.	
<i>h.</i> Hgr. ♀.	Singapore.	Gen. Hardwicke } [P.]	(Types of <i>C.</i> <i>annulatus</i> .)
<i>i.</i> Yg.	Sumatra.	Leyden Museum.	
<i>k-l.</i> ♀.	Borneo.	Sir E. Belcher [P.].	
<i>m-n.</i> ♀ & hgr.	Manilla.	Dr. Collingwood [P.].	
<i>o-p.</i> ♀ & hgr.	Manilla Bay.	J. J. Walker, Esq. [P.].	
<i>q.</i> ♀.	Philippines.	H. J. Veitch, Esq. [P.].	
<i>r.</i> ♀.	Java.		
<i>s.</i> ♀.	Fly R., New Guinea.	Rev. S. Macfarlane [C.].	
<i>t.</i> Ad., skull.	Java.		

## 3. XENODERMUS.

*Xenodermus*, *Reinh. Overs. Vidensk. Selsk. Forh.* 1836, p. 6; *Wiegmann Arch. f. Nat.* 1837, p. 136; *Reinh. Vidensk. Selsk. Skrift.* x. 1843, p. 257; *Gray, Cat. Sn.* p. 81 (1849); *Dum. & Bibr. Erp. Gén.* vii. p. 45 (1854).

*Gonionotus*, *Gray, in Stokes's Discov. in Austral.* i. p. 502 (1846).

Teeth subequal, about 15 in each maxillary. Head distinct from neck, covered with granular juxtaposed scales; nostrils directed forwards, in an undivided nasal; eye moderate, with round pupil. Body slender, compressed, with small juxtaposed keeled scales and longitudinal rows of large tubercles; ventrals well developed. Tail long, with single subcaudals.

Java; Sumatra; Pinang.

1. *Xenodermus javanicus*.

*Xenodermus javanicus*, *Reinh. Overs. Vidensk. Selsk. Forh.* 1836, p. 6, and *Vidensk. Selsk. Skrift.* x. 1843, p. 257, pl. ii. figs. 1-8; *Gray, Cat.* p. 81 (1849); *Dum. & Bibr.* vii. p. 45, pl. lxiii. (1854). *Gonionotus plumbeus*, *Gray, in Stokes's Discov. in Austral.* i. p. 503, pl. iv. (1846).

*Xenoderma javanicum*, *F. Müll. Verh. nat. Ges. Basel*, viii. 1887, p. 268.

Rostral small, triangular, not visible from above; nasals meeting behind the point of the rostral, followed by two pairs of small shields; labials scarcely enlarged, about 20 on each side; no chin-shields. About 40 scales across the body; the tubercles disposed in pairs alternating with single ones on the vertebral line, and forming a single series along each side of the back. Ventrals 173-185; anal entire; subcaudals 147. Dark brown above, lighter beneath.

Total length 350 millim.; tail 135.

Java, Sumatra, Pinang.

a. ♂ (V. 173; C. 147). Java. (Type of *Gonionotus plumbeus*.)

## 4. STOLICZKAIA.

*Stoliczkaia*, *Jerdon, Proc. As. Soc. Beng.* 1870, p. 81; *Bouleng. Faun. Ind., Rept.* p. 354 (1890).

Teeth small, subequal, about 14 in each maxillary. Head distinct from neck, covered with large shields; nostrils directed forwards; nasal shield undivided; eye small, with round pupil. Body slender, compressed; scales elliptical, juxtaposed, strongly keeled, increasing in size towards the ventrals, which are well developed. Tail long; subcaudals single.

Khasi Hills, N.E. India.

1. *Stoliczkaia khasiensis*.

*Stoliczkaia khasiensis*, *Jerdon, Proc. As. Soc. Beng.* 1870, p. 81; *Theob. Cat. Rept. Brit. Ind.* p. 205 (1876); *Bouleng. Faun. Ind., Rept.* p. 355, fig. (1890).

Rostral extremely small, not visible from above; a pair of small internasals; a pair of very large præfrontals; frontal broader than long and shorter than the præfrontals; supraocular very narrow; parietals nearly twice as long as the frontal; a small loreal; a large præocular and two postoculars; eight upper labials, fifth and sixth entering the eye, eighth much elongate; temporals small, scale-like; a single pair of small chin-shields, in contact with three lower labials. Scales in 30 rows, dorsals separated by naked skin, laterals larger and juxtaposed. Ventrals 210; anal entire; subcaudals 115. Purplish brown above; three or four outer rows of scales and ventrals white with brown edges.

Total length 670 millim.; tail 190.

Khasi Hills.

a. ♀ (V. 210; C. 115).

Khasi Hills.

T. C. Jerdon, Esq. [P.]  
(Type.)

5. *NOTHOPSIS*.

*Nothopsis*, *Cope, Proc. Ac. Philad.* 1871, p. 201.

Teeth subequal, about 12 in each maxillary. Head distinct from neck, covered with small scales above, except a pair of internasals in contact with nasals and rostral, an isolated median frontal, and a pair of small oval parietals, each also entirely surrounded by small scales; nostril in a single nasal; eye rather small, with round pupil. Body slender, compressed, with small, feebly imbricate, keeled scales; ventrals well developed, angulate on the sides. Tail rather long; subcaudals in two rows.

Central America.

1. *Nothopsis rugosus*.

*Nothopsis rugosus*, *Cope, l. c.* pl. xvii. figs. 1-7.

Rostral subtriangular, not visible from above; frontal shield broad cordate, the apex posterior, divided in front by a median suture; parietals narrow, separated by a single series of scales; upper labials small, 12; a pair of very small chin-shields. Scales in 29 rows, all strongly keeled. Ventrals 158; anal entire; subcaudals about 65. Brown, yellowish on the sides; sides with dark brown triangular blotches edged with yellow; belly yellow, with small brown spots.

Total length 381 millim.

Isthmus of Darien.

## Subfam. 2. COLUBRINÆ.

- Coronellæ, part., Hydrophidæ, part., Colubri, part., Dendrophidæ, part., *Boie, Isis*, 1827, p. 510.
- Calamariens, Plagiodontiens, Isodontiens, Colubriens, Lycodontiens, part. (Lycodontiens, Boëdoniens, Euguathiens, Paréasiens, part.), Leptognathiens, part., Syncrântériens, Diacrântériens, *Duméril, Mém. Ac. Sc. xxiii.* p. 427, 1853; *Duméril & Bibron, Erp. Gén.* vii. p. 23, 1854.
- Coryphodontiens, *Duméril & Bibron, l. c.*
- Calamaridæ, part., Coronellidæ, part., Natricidæ, Colubridæ, Dryadidæ, part., Dendrophidæ, part., Lycodontidæ, *Günther, Cat. Col. Sn.* 1858.
- Calamaridæ, part., Probletorhinidæ, part., Coronellidæ, part., Colubridæ, Potamophilidæ, part., Dryophilidæ, part., Lycodontidæ, Dipsadidæ, part., *Jan, Elenco sist. Ofid.* 1863.
- Calamaridæ, part., Oligodontidæ, Colubridæ, part., Dendrophidæ, part., Lycodontidæ, *Günther, Rept. Brit. Ind.* p. 169, 1864.
- Acontiophidæ, *Günther, Proc. Zool. Soc.* 1875, p. 232.
- Trimerorhini, part., *Peters, Reise n. Mossamb.* iii. p. 118, 1882.
- Calamarinæ, part., Coronellinæ, Colubrinæ, Lycodontinæ, Homalopsinæ, part., Acontiophidæ, *Cope, Proc. Amer. Philos. Soc.* xxiii. p. 484, 1886.
- Colubrinæ, *Boulenger, Faun. Ind., Rept.* p. 278, 1890.

Postfrontal bone not produced over the supraorbital region. Maxillary and dentary bones armed with solid teeth along their whole length; palatines and pterygoids usually toothed\*. Scales usually imbricate.

Cosmopolitan; but very scantily represented in Australia.

*Synopsis of the Genera.*

- I. Hypapophyses present throughout the vertebral column, represented on the posterior dorsal vertebræ by a more or less developed crest or tubercle projecting below the condyle (see fig. 12, A, p. 171).
- A. Dentary bone attached loosely to the apex of the articular and freely movable on it (see fig. 14, p. 181); teeth very numerous and closely set, equal, 30 to 50 in each maxillary. Eye moderate or rather small, with round pupil; scales smooth, without pits . . . . . 6. *Polyodontophis*, p. 181.
- B. Dentary bone not or but slightly movable on the articular.
1. Maxillary teeth equal, 20 to 30; anterior mandibular teeth enlarged; eye moderate or large, with round pupil. Scales smooth, without pits . . . . . 7. *Dromicodryas*, p. 189.

\* Unless the contrary be stated in the generic diagnoses, the palatine and pterygoid bones are understood to be armed with teeth; the vomers are constantly toothless, and so is the premaxillary in all Snakes, except some of the *Boidea* and *Hysiidæ* and *Xenopeltis*.



Scales keeled, without pits; nostril in a single nasal.

8. *Xenochrophis*, p. 191.

2. Maxillary teeth minute posteriorly, much larger anteriorly; eye rather large, with round pupil.

Scales keeled . . . . . 9. *Prymnomiodon*, p. 192.

3. Posterior maxillary teeth longest; mandibular teeth subequal; eye moderate or large, with round pupil; a pair of internasal shields.

a. Scales forming longitudinal series throughout the body.

Maxillary teeth 18 to 40, forming a continuous series.

10. *Tropidonotus*, p. 192.

Maxillary teeth 14 to 22, the last two very large fangs separated from the rest by an interspace; snout rounded; scales keeled.

11. *Macropisthodon*, p. 265.

Maxillary teeth 12 to 14, the last two very large fangs separated from the rest by an interspace; snout pointed, projecting; scales smooth . . . . . 12. *Lioheterodon*, p. 268.

b. Scales disposed obliquely on the anterior part of the body.

Maxillary teeth 20 to 28 . . . . . 13. *Pseudoxenodon*, p. 270.

4. Posterior maxillary teeth longest; eye moderate or small, with round pupil; a single internasal shield.

Mandibular teeth subequal; nostril in a semidivided nasal; scales without pits . . . . . 14. *Helicops*, p. 272.

Mandibular teeth decreasing in size posteriorly; nostril between two nasals; scales with apical pits . . 15. *Hydræthiops*, p. 280.

5. Maxillary teeth subequal; mandibular teeth equal or anterior somewhat enlarged; eye small or rather small, with round or vertically elliptic pupil.

a. Labial shields not entering the nostril; subcaudals in two rows.

a. Maxillary bone extending forwards beyond the palatines.

\* Scales keeled; a præocular; nostrils on upper surface of snout.

Maxillary teeth strong, about 30 . . 16. *Tretanorhinus*, p. 281.

Maxillary teeth small, 20 to 25 . . 17. *Opisthotropis*, p. 283.

\*\* Scales keeled; one or two præoculars; nostrils lateral.

Maxillary teeth 14 to 18 . . . . . 18. *Ischnognathus*, p. 285.



\*\*\* Scales keeled; loreal and præfrontal entering the eye.

† Scales not striated; pupil round.

A pair of internasals . . . . . 19. *Amphiardis*, p. 290.

A single internasal . . . . . 20. *Haldea*, p. 290.

†† Scales striated; pupil subelliptic.

A pair of internasals . . . . . 21. *Streptophorus*, p. 291.

\*\*\*\* Scales smooth.

† Loreal and præocular present.

Nostril an oblique slit between two nasals; pupil round.  
23. *Hydrablades*, p. 296. ✓

Nostril between two nasals; pupil vertically subelliptic.  
24. *Trachischium*, p. 297.

Nostril in a semidivided nasal; pupil vertically subelliptic.  
25. *Rhabdops*, p. 300.

†† No loreal; a large semidivided nasal in contact with a præocular.

Dorsal scales oblique . . . . . 26. *Plagiopholis*, p. 301.

††† Loreal and præfrontal entering the eye.

Maxillary teeth 30 to 35; pupil vertically subelliptic.  
27. *Oxyrhabdium*, p. 302.

Maxillary teeth 20 to 25; pupil round.  
28. *Xylophis*, p. 303.

†††† No loreal; a single small nasal; præocular present or absent.

Maxillary teeth 20 to 22; pupil vertically subelliptic.  
29. *Brachyorrhus*, p. 305.

β. Maxillary bone not extending forwards beyond the palatines; scales keeled; loreal and præfrontal entering the eye.

Maxillary teeth about 10; scales striated; a single præfrontal.  
22. *Chersodromus*, p. 295.

Maxillary teeth about 20; scales not striated; a pair of præfrontals.  
30. *Elapoides*, p. 306.

b. Labial shields not entering the nostril; subcaudal shields single.

Scales keeled . . . . . 31. *Achalinus*, p. 308.

- c. Nostril between two small nasals and the first labial.  
 Scales keeled; subcaudals single .. 32. *Haplocercus*, p. 309.  
 Scales smooth; subcaudals single.. 33. *Aspidura*, p. 310.  
 Scales smooth; subcaudals paired.. 34. *Blythia*, p. 313.
6. Posterior maxillary teeth enlarged; anterior mandibular teeth much larger than the posterior; eye small, with round pupil.  
 Scales smooth, without pits ..... 35. *Pseudoxyrhopus*, p. 314.
7. Maxillary teeth equal; anterior mandibular teeth larger than the posterior; eye moderate, with vertically elliptic pupil; scales with apical pits.  
 Scales keeled; no loreal shield .... 36. *Lycognathophis*, p. 317.  
 Scales smooth..... 37. *Ablabophis*, p. 318.
8. Posterior maxillary and mandibular teeth smallest; eye moderate or rather small, pupil usually vertically elliptic.
- a. Maxillary teeth forming a continuous series.
- a. No loreal pit.  
 Scales smooth, without pits; pupil round.  
 38. *Tetralepis*, p. 319.
- Scales smooth, without pits; pupil vertically subelliptic.  
 39. *Lamprophis*, p. 320.
- Scales keeled, with apical pits, the middle row enlarged and bicarinate..... 40. *Gonionotophis*, p. 323.
- β. Loreal region with a pit; scales without pits.  
 Scales keeled ..... 41. *Bothrophthalmus*, p. 324.  
 Scales smooth ..... 42. *Bothrolycus*, p. 325.
- b. Enlarged anterior maxillary teeth separated from the small teeth by an interspace.
- a. Scales equal, smooth, with apical pits.  
 Nostril between two nasals; pupil round.  
 43. *Cyclocorus*, p. 326.
- Nostril between two nasals; pupil vertical.  
 44. *Boodon*, p. 327.
- Nostril in a single nasal, followed by a small postnasal; pupil vertical ..... 45. *Lycophidium*, p. 336.
- β. Scales without pits, middle row enlarged.  
 Body compressed; scales smooth .. 46. *Hormonotus*, p. 343.  
 Body cylindrical; scales keeled .. 47. *Simocephalus*, p. 344.
- II. Hypapophyses absent in the posterior dorsal vertebræ, the lower surface of which is smooth or with a low keel (see fig. 12, B, p. 171).

[The Synopsis to be continued in the second volume.]

## 6. POLYODONTOPHIS.

- Herpetodryas, part., *Schleg. Phys. Serp.* ii. p. 173 (1837).  
 Enicognathus (*non G. Gray*), *Dum. & Bibr. Erp. Gén.* vii. p. 328 (1854).  
 Ablabes, part., *Günth. Cat. Col. Sn.* p. 27 (1858), and *Rept. Brit. Ind.* p. 223 (1864).  
 Enicognathus, part., *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 266.  
 Henicognathus, *Cope, Journ. Ac. Philad.* viii. 1876, p. 138.  
 Henicognathus, part., *Bocourt, Miss. Sc. Mex., Rept.* p. 625 (1886).  
 Polyodontophis, *Bouleng. Faun. Ind., Rept.* p. 301 (1890).

Teeth very numerous and closely set, 30 to 50 in each maxillary, equal in size. Dentary bone completely detached from the articular posteriorly. Head short, not or but slightly distinct from neck \*; eye moderate or rather small, with round pupil. Body cylindrical, elongate; scales smooth, without apical pits, in 17 or 19 rows. Tail moderate or long; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Madagascar and Comoro Islands; South-eastern Asia; Central America.

Fig. 14.

Maxillary and mandible of *Polyodontophis collaris*.*Synopsis of the Species.*

- I. 30 to 32 teeth in each maxillary; 8 upper labials, fourth and fifth entering the eye; subcaudals 65-99.
- A. Scales in 17 rows.
- Loreal deeper than long; frontal considerably shorter than the parietals . . . . . 1. *rhodogaster*, p. 182.  
 Loreal as deep as long, or longer than deep; frontal but slightly shorter than the parietals . . . . . 2. *torquatus*, p. 183.
- B. Scales in 19 rows . . . . . 3. *mayottensis*, p. 183.
- II. 37 to 50 teeth in each maxillary.
- A. Upper border of rostral shield just visible from above.
1. 9 or 10 upper labials.

\* Unless otherwise stated in the generic diagnoses, the upper head-shields are understood to be normal—viz., to consist of a rostral, a pair of internasals, a pair of præfrontals, a frontal, a pair of parietals, and, on each side, a supra-ocular, one or two nasals, a loreal, one or more præ- and postoculars, temporals, and several labials. The presence of suboculars is usually considered as a merely specific character, e. g. *Tropidonotus*.

a. Parietal not in contact with the lower postocular; subcaudals 102-131.

Rostral not twice as broad as deep . . . . . 4. *sumichrasti*, p. 183.  
Rostral twice as broad as deep . . . . . 5. *collaris*, p. 184.

b. Parietal in contact with both postoculars.

Subcaudals 89-145 . . . . . 6. *geminatus*, p. 185.  
Subcaudals 47-76 . . . . . 7. *subpunctatus*, p. 186.

2. 7 or 8 upper labials; subcaudals  
56-70 . . . . . 8. *sagittarius*, p. 187.

B. Portion of rostral visible from above measuring two fifths its distance from the frontal.

9 or 10 upper labials; subcaudals 73-75. 9. *bistrigatus*, p. 188.

8 or 9 upper labials; subcaudals more than  
100 . . . . . 10. *annulatus*, p. 189.

### 1. *Polyodontophis rhodogaster*.

*Herpetodryas rhodogaster*, *Schleg. Phys. Serp.* ii. p. 193 (1837).

*Enicognathus rhodogaster*, part., *Dum. & Bibr.* vii. p. 332, pl. lxxx. fig. 2 (1854); *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 273, and *Icon. Gén.* 16, pl. iii. fig. 2 (1866); *Boettg. Abh. Senck. Ges.* xi. 1877, p. 8.

*Polyodontophis rhodogaster*, *Bouleng. Faun. Ind., Rept.* p. 302 (1890).

Rostral broader than deep, just visible from above; suture between the internasals shorter than that between the præfrontals; frontal longer than its distance from the end of the snout, considerably shorter than the parietals; loreal deeper than long; one præocular; two postoculars, both in contact with the parietal; temporals 1 + 2; eight upper labials, fourth and fifth entering the eye; four lower labials in contact with the anterior chin-shields, which are as long as or a little shorter than the posterior. Scales in 17 rows. Ventrals 175-188; anal divided; subcaudals 77-84. Pale brown above, with a darker vertebral stripe, three scales wide, edged on each side by a black line; a dark brown streak along each side, on the second row of scales; upper surface of head dark brown, with a yellowish spot on the outer side of the parietal shields; upper lips yellowish white, with a few black dots, and edged with black above; throat and lower surface of neck yellowish white, dotted with black; belly and lower surface of tail bright pink in the middle, yellow on the sides; a series of black dots may be present on each side of the belly.

Total length 650 millim.; tail 170.

Madagascar.

*α-c.* ♂ (V. 188; C. 77), ♀ (V. 186; C. 73), & yg. (V. 176; C. 84). Madagascar.



2. *Polyodontophis torquatus*.

- Enicognathus rhodogaster*, part., *Dum. & Bibr.* vii. p. 332 (1854);  
*Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 273, and *Icon. Gtn.* 16,  
 pl. iii. fig. 1 (1866); *Boetty. Abh. Senck. Ges.* xi. 1877, p. 8.  
*Coronella torquata*, *Bouleng. Ann. & Mag. N. H.* (6) i. 1888, p. 103,  
 pl. v. fig. 3.

Apart from a different coloration this species may be distinguished from the preceding in its more elongate head; the loreal is as long as deep or longer than deep; and the frontal, which is much longer than its distance from the end of the snout, is but slightly shorter than the parietals. Ventrals 144–200; subcaudals 65–95. Brown above, uniform or with small black spots arranged in longitudinal series; sometimes a dark line along the middle series of scales; a more or less distinct dark cross band behind the parietals; a whitish, black-edged streak along the upper lip; throat brown, with white, dark-edged markings; belly and lower surface of tail yellowish or pink, with more or less numerous brown or black dots.

Total length 610 millim.; tail 170.

Madagascar.

- |  |                      |                             |
|--|----------------------|-----------------------------|
| a. ♀ (V. 181; C. 65).                            | Near Tamantave.      | Rev. W. Deans Cowan [C.].   |
| b. ♂ (V. 172; C. 74).                            | Ankafana, Bet-sileo. | Rev. W. Deans Cowan [C.].   |
| c-d. ♂ (V. 167; C. 79)<br>& yg. (V. 181; C. 72). | Antongil Bay.        | L. H. Ransome, Esq. [P.].   |
| e. ♂ (V. 144; C. 71).                            | Imerina.             | Rev. R. Baron [C.].         |
| f. Hgr. (V. 186; C. 67).                         | Madagascar:          | Rev. R. Baron [C.]. (Type.) |
| g. ♂ (V. 170; C. 78).                            | Madagascar.          |                             |

3. *Polyodontophis mayottensis*.

*Ablabes (Enicognathus) rhodogaster*, var. *mayottensis*, *Peters, Mon. Berl. Ac.* 1873, p. 793.

Closely allied to the preceding, but 19 rows of scales, 199 ventrals, and 99 subcaudals. Coloration similar to *P. rhodogaster*, but fine yellowish cross-lines on the nape, which bears no dark collar.

Mayotta, Comoro Islands.

4. *Polyodontophis sumichrasti*.

*Henicognathus sumichrasti*, *Bocourt, Miss. Sc. Mex., Rept.* p. 628, pl. xli. fig. 5 (1886).

*Rhadinea sumichrasti*, *Cope, Bull. U.S. Nat. Mus.* no. 32, 1887, p. 79.

*Polyodontophis sumichrasti*, *Bouleng. Faun. Ind., Rept.* p. 302 (1890).

Rostral broader than deep, just visible from above; suture between the internasals a little shorter than that between the præfrontals; frontal longer than its distance from the end of the snout, a little shorter than the parietals; loreal square: one præocular; two postoculars, only the upper in contact with the parietal;



temporals 2+2; nine upper labials, fourth, fifth, and sixth entering the eye; four lower labials in contact with the anterior chin-shields, which are about the same size as the posterior. Scales in 17 rows. Ventrals 181; anal divided; subcaudals 112. Yellowish-olive above, with three brown longitudinal streaks on the anterior part of the body; further back, these streaks break up into series of small spots and disappear towards the middle of the body; a dark brown band between the eyes and another across the occiput, behind the parietals; a whitish dark-edged streak along the upper lip; yellowish white inferiorly, throat and anterior ventrals with brown dots; a brown dot at the outer end of each ventral or subcaudal shield.

Total length 528 millim.; tail 171.

Tehuantepec.

##### 5. *Polyodontophis collaris*. (PLATE XII. fig. 1.)

*Psammophis collaris*, Gray, *Ann. & Mag. N. H.* (2) xii. 1853, p. 390.

*Ablabes collaris*, Günth. *Cat.* p. 28 (1858), and *Rept. Brit. Ind.* p. 228 (1864); *Stoliczka, Journ. As. Soc. Beng.* xl. 1871, p. 450; *Anders. Proc. Zool. Soc.* 1871, p. 171, and *An. Zool. Res. Yunnan, Rept.* p. 810 (1879).

— *sinensis*, Günth. *Ann. & Mag. N. H.* (6) iv. 1889, p. 220.

*Polyodontophis collaris*, Bouleng. *Faun. Ind., Rept.* p. 302 (1890).

Rostral twice as broad as deep, just visible from above; suture between the internasals shorter than that between the præfrontals; frontal longer than its distance from the end of the snout, as long as or shorter than the parietals; loreal as long as or a little longer than deep; one præocular; two postoculars, only the upper in contact with the parietal; temporals 1 (or 2) + 2; nine or ten upper labials, fourth, fifth, and sixth entering the eye; four lower labials in contact with the anterior chin-shields, which are as long as the posterior. Scales in 17 rows. Ventrals 159–190; anal divided; subcaudals 102–131. Brown above, vertebral region greyish, usually with a series of small round black spots, or with a dark stripe; head with small black spots or vermiculations above, and two black cross bands, one across the posterior part of the frontal and supraoculars, the other across the occiput; a large black nuchal spot or cross band, bordered with yellow posteriorly; a black line from the nostril to the nuchal spot, passing through the eye, bordering the white black-dotted upper lip. Lower parts yellowish, each ventral with an outer black spot or streak, which may be confluent on the posterior part of the body; anterior ventrals with a pair of median dots in addition.

Total length 760 millim.; tail 235.

Himalayas (to 10,000 feet) as far west as Simla; Assam, Aracan, Upper Burma, S. China.

*a-b.* ♂ (V. 173; C. ?) & Khasi Hills. Sir J. Hooker [P.]. (Types.)  
hgr. (V. 172; C. 102).

- c-g. ♂ (V. 166; C. 118), ♀ (V. 177, 174; C. 125, 105), & hgr. (V. 174, 165; C. ♀, 131). Khasi Hills. T. C. Jerdon, Esq. [P.]
- h. ♂ (V. 179; C. 102). Darjeeling. W. T. Blanford, Esq. [P.]
- i. ♀ (V. 180; C. 110). Nepal. B. H. Hodgson, Esq. [P.]
- k. ♂ (V. 159; C. ?). Himalayas. Col. Beddome [C.]
- l. ♂ (V. 168; C. 121). Burma. Col. Beddome [C.]
- m. ♂ (V. 175; C. 111). Burma. W. Theobald, Esq. [C.]
- n. ♀ (V. 187; C. ?). Ichang, Upper Yang-tse-Kiang. A. E. Pratt, Esq. [C.] (Type of *A. sinensis*)
- o. ♀, skel. Darjeeling. W. T. Blanford, Esq. [P.]

6. *Polyodontophis geminatus*.

*Coluber geminatus*, Boie, *Isis*, 1826, p. 211.

*Lycodon melanocephalus*, Gray, *Ill. Ind. Zool.* ii. pl. lxxxiii. fig. 2 (1834).

— *catenatus*, Gray, *l. c.* pl. lxxxv. fig. 2.

*Herpetodryas geminatus*, Schleg. *Phys. Serp.* ii. p. 194 (1837).

— *prionotus*, Cantor, *Proc. Zool. Soc.* 1839, p. 52.

*Enicognathus geminatus*, Dum. & Bibr. vii. p. 333 (1854); *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 277, and *Icon. Gén.* 16, pl. iv. fig. 2 (1866).

*Ablabes melanocephalus*, Günth. *Cat.* p. 28 (1858), and *Rept. Brit. Ind.* p. 229 (1864), and *Proc. Zool. Soc.* 1872, p. 590.

— *geminatus*, Günth. *Cat.* p. 29.

*Enicognathus javanicus*, Bteek. *Nat. Tijdschr. Nedert. Ind.* xvi. 1859, p. 437; *Edeling, op. cit.* xxxi. 1870, p. 386.

— *ornatus*, *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 276, and *Icon. Gén.* 16, pl. iii. fig. 5, and *N. Arch. Mus.* ii. 1866, *Bull.* p. 8.

*Ablabes (Enicognathus) flaviceps*, Günth. *Ann. & Mag. N. H.* (3) xviii. 1866, p. 26, pl. vi. fig. B; *Stoliczka, Journ. As. Soc. Beng.* xlii. 1873, p. 123.

— (*Coronella*) *ornatus*, Fischer, *Abh. naturw. Ver. Hamb.* ix. 1880, p. 8.

*Polyodontophis melanocephalus*, Bouleng. *Faun. Ind., Rept.* p. 301 (1890); *Boetty. Ber. Offenb. Ver. Nat.* 1892, p. 127.

Rostral twice as broad as deep, just visible from above; suture between the internasals shorter than that between the præfrontals; frontal longer than its distance from the end of the snout, shorter than the parietals; loreal as long as deep or a little deeper than long; one præocular; two postoculars, both in contact with the parietal; temporals 2+2; nine upper labials, fourth, fifth, and sixth entering the eye; four lower labials in contact with the anterior chin-shields, which are as large as the posterior. Scales in 17 rows. Ventrals 144-169; anal divided; subcaudals 89-145. Brown or blackish above, with two lighter longitudinal streaks; upper lip with a white, black-edged streak; lower parts yellowish, with a black dot or spot at the outer end of each ventral or subcaudal shield.

Total length 410 millim.; tail 155.

Siam, Malay Peninsula, Sumatra, Borneo, Java.

A. Head dark brown, separated from the body by a yellow collar; dorsal stripes yellowish. (*C. geminatus*, Boic.)

a. ♀ (V. 162; C. ?). Java. Leyden Museum.

B. Head dark brown; dorsal stripes yellowish, each with a series of black spots. (*L. melanocephalus*, Gray, *H. prionotus*, Cant., *E. ornatus*, Jan.)

b. ♂ (V. 152; C. ?). Singapore? Gen. Hardwicke [P.]

(Type of *L. melanocephalus*.)

c, d. ♂ (V. 149; C. 103) Singapore? Gen. Hardwicke [P.]

& hgr. (V. 144; C. ?).

e. Hgr. (V. 144; C. 98). Singapore. Dr. Dennys [P.]

C. Head yellowish or reddish brown, with yellow black-edged dots; body as in the preceding. (*L. catenatus*, Gray, *E. javanicus*, Bleek.)

f. Hgr. (V. 145; C. 89). Java. Dr. Bleeker.

(Type of *E. javanicus*.)

g-h. ♀ (V. 166; C. 128) Tengger Mountains, Hr. Fruhstorfer [C.]  
& yg. (V. 156; C. 145). Java.

i. ♂ (V. 155; C. ?). Sumatra. Zool. Society.

D. Head yellowish-brown; dorsal stripes bluish grey, each with a series of small black spots. (*A. flaviceps*, Gthr.)

k. ♀ (V. 147; C. 93). Malay Archipelago. (Type of *A. flaviceps*.)

l-m. ♀ (V. 160, 154; Borneo. L. L. Dillwyn, Esq.

C. ?, ?). [P.]

## 7. *Polydontophis subpunctatus*.

*Seba, Thes. i. pl. xi. (1734).*

*Calamaria sagittaria (non Cant.), Jerdon, Journ. As. Soc. Beng. xxii. 1853, p. 528.*

*Oligodon subpunctatus, Dum. & Bibr. vii. p. 58 (1854); Jan, Arch. Zool. Anat. Phys. ii. 1863, p. 39; Günth. Rept. Brit. Ind. p. 208 (1864); Jan, Icon. Gén. 48, pl. i. fig. 4 (1876).*

*Enicognathus melanocephalus, part., Dum. & Bibr. t. c. p. 330.*

*Oligodon spinapunctatus, Jan, Arch. Zool. Anat. Phys. ii. 1862, p. 40; Günth. l. c.; F. Müll. Verh. nat. Ges. Basel, viii. 1887, p. 262.*

*Enicognathus humberti, Jan, t. c. 1863, p. 275, and Icon, Gén. 16, pl. iv. fig. 1 (1866).*

*Ablabes humberti, Günth. l. c. p. 228; Blanf. Journ. As. Soc. Beng. xlvi. 1879, p. 115.*

*Rhadinae melanocephala, Cope, Proc. Ac. Philad. 1868, p. 132.*

*Polydontophis subpunctatus, Bouleng. Faun. Ind., Rept. p. 303 (1890).*

Rostral nearly twice as broad as deep; suture between the internasals a little shorter than that between the prefrontals; frontal longer than its distance from the end of the snout, as long as the

parietals or a little shorter; loreal longer than deep; one præocular; two postoculars, both in contact with the parietal; temporals 1 (or 2)+2; nine or ten upper labials, fifth and sixth, or fourth, fifth, and sixth, entering the eye; eighth upper labial usually excluded from the labial margin, simulating a lower anterior temporal; four lower labials in contact with the anterior chin-shields, the first usually separated from its fellow by the symphy-sial; posterior chin-shields a little longer than the anterior. Scales in 17 rows. Ventrals 151-240; anal divided; subcaudals 47-76. Pale brown above, with a vertebral series of small round black spots; usually a more or less distinct dark lateral line or series of dots; head and nape dark brown or black; lips, canthus rostralis, a transverse line between the eyes, and two broad cross bands, one in front and one behind the nape, yellow; the dark colour often extending along the median line, bisecting the yellow collar; lower surfaces yellow, each shield with a black dot near its outer border.

From snout to vent 440 millim.; tail 95.

Peninsular India and Ceylon.

- |   |                    |                              |
|---|--------------------|------------------------------|
| a-b. Hgr. (V. 202, 187; C. 62, 63).   | Matheran.          | Dr. Leith [P.].              |
| c. ♀ (V. 174; C. 47).   | Madras.            | J. E. Boileau, Esq. [P.].    |
| d. Hgr. (V. 214; C. 51).  | Madras Presidency. | Col. Beddome [C.].           |
| e-f. ♂ (V. 201; C. 63) & yg. (V. 206, 161; C. 64, 66).                        | Golcondah Hills.   | Col. Beddome [C.].           |
| g-k. ♂ (V. 160; C. 76), hgr. (V. 195; C. 66), & yg. (V. 161, 162; C. 65, 68). | Anamallays.        | Col. Beddome [C.].           |
| l. ♀ (V. 174; C. 54).   | Ceylon.            | R. Templeton, Esq. [P.].     |
| m. ♀ (V. 166; C. 57).   | Ceylon.            | W. H. Holdsworth, Esq. [C.]. |

### 8. *Polyodontophis sagittarius*.

*Calamaria sagittaria*, Cantor, *Proc. Zool. Soc.* 1839, p. 49, and *Cat.*

*Mal. Rept.* p. 64 (1847).

*Enicognathus grayi*, Jan, *Arch. Zool. Anat. Phys.* ii. 1863, p. 274, and *Icon. Gén.* 16, pl. iii. fig. 3 (1866).

— braconnieri, Jan, *ll. cc.* p. 275, pl. iii. fig. 4.

*Ablabes sagittarius*, Günth. *Rept. Brit. Ind.* p. 227 (1864).

*Polyodontophis sagittarius*, Bouleng. *Faun. Ind., Rept.* p. 303 (1890).

Rostral not twice as broad as deep; suture between the inter-nasals shorter than that between the præfrontals; frontal longer than its distance from the end of the snout, shorter than the parietals; loreal small and longer than deep, or absent; one præocular; two postoculars, both in contact with the parietal; temporals 1+1 or 1+2+1; seven or eight upper labials, third and fourth or fourth and fifth entering the eye; four lower labials in contact with the anterior chin-shields, which are about as large as the posterior. Scales in 17 rows. Ventrals 205-228; anal divided;



subcaudals 56-70. Yellowish or pale brown above; sides brown or grey, separated from the pale dorsal region by a black line; a vertebral series of minute black dots; head and nape dark brown or black, forehead marbled with yellow, and with a large elongate oval patch of yellow on each side of the back of the head; the black nuchal spot more or less distinctly bordered with yellow behind. Lower surfaces yellow, with a black dot at the outer extremity of each ventral.

Total length 280 millim.; tail 60.

West Himalayas, Bengal, Assam, Pinang.

- |   |                      |                                |
|---|----------------------|--------------------------------|
| a. ♀ (V. 228; C. 64).                                       | Chamba, W. Himalaya. | Messrs. v. Schlagintweit [C.]. |
| b. ♂ (V. 213; C. 70).                                       | Pinang.              | Dr. Cantor.                    |
| c-f. Hgr. & yg. (V. 215, 205, 212, 209; C. 68, 64, 64, 57). | — ?                  | Gen. Hardwicke [P.].           |
| g-h. ♀ (V. 222, 201; C. 56, 67).                            | — ?                  |                                |

### 9. *Polyodontophis bistrigatus*. (PLATE XII. fig. 2.)

*Ablabes bistrigatus*, *Günth. Ann. & Mag. N. H.* (4) i. 1868, p. 417; *Theob. Journ. Linn. Soc.* x. 1868, p. 42, and *Cat. Rept. Brit. Ind.* p. 155 (1876); *Anders. An. Zool. Res. Yunnan, Rept.* p. 811 (1879).

*Polyodontophis bistrigatus*, *Bouleng. Faun. Ind., Rept.* p. 304 (1890); *W. L. Sclater, Journ. As. Soc. Beng.* ix. 1891, p. 234.

Rostral not twice as broad as long, the portion visible from above measuring two fifths its distance from the frontal; suture between the internasals shorter than that between the præfrontals; frontal longer than its distance from the end of the snout, shorter than the parietals; loreal as long as deep or longer than deep; one præocular, two postoculars, both in contact with the parietal; temporals 1 (or 2)+2; 10 upper labials, fourth, fifth, and sixth entering the eye; eighth upper labial usually excluded from the labial margin, assuming the position of a lower anterior temporal; four lower labials in contact with the anterior chin-shields, which are as long as the posterior. Scales in 17 rows. Ventrals 184-186; anal divided; subcaudals 73-75. Back ruddy brown, with a vertebral series of black dots; head and nape black, emitting a black band running on each side of the body and tail; a yellow band on each side of the head, sending off a hook on each supraocular shield, and a pair of yellow spots on the nape. Lower surfaces uniform yellow.

Total length 300 millim.; tail 80.

Burma, Nicobars.

- |                       |        |                         |
|-----------------------|--------|-------------------------|
| a. ♂ (V. 184; C. 75). | Pegu.  | W. Theobald, Esq. [C.]. |
|                       |        | (Type.)                 |
| b. ♀ (V. 186; C. 73). | Burma. | Col. Beddome [C.].      |



10. *Polyodontophis annulatus*.

- Enicognathus annulatus*, *Dum. & Bibr.* vii. p. 335, pl. lxxx. fig. 1 (1854); *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 278, and *Icon. Gén.* 16, pl. iv. fig. 3 (1866); *Günth. Ann. & Mag. N. H.* (4) i. 1863, p. 418; *F. Müll. Verh. nat. Ges. Basel*, vi. 1878, p. 659; *Sumichrast, Bull. Soc. Zool. France*, 1880, p. 181.
- Henicognathus annulatus*, *Cope, Journ. Ac. Philad.* (2) viii. 1876, p. 138; *Bocourt, Miss. Sc. Mex., Rept.* p. 626, pl. xl. fig. 6 (1886).
- Diadophis annulatus*, *Garm. N. Am. Rept.* p. 70 (1883).
- Polyodontophis annulatus*, *Bouleng. Faun. Ind., Rept.* p. 302 (1890).

Snout much flattened, truncated; rostral broader than deep, well visible from above; internasals much shorter than the præfrontals; frontal longer than its distance from the end of the snout, a little shorter than the parietals; loreal as long as deep or deeper than long; one præocular; two postoculars, both in contact with the parietal; temporals 1+2 (or 2+3); nine (exceptionally eight) upper labials, fourth, fifth, and sixth (or fourth and fifth) entering the eye; four lower labials in contact with the anterior chin-shields, which are a little longer than the posterior. Scales in 17 rows. Ventrals 137-157; anal divided; subcaudals 116-136. Anterior half of body red, with pairs of black bars enclosing a yellow or lavender-grey zone; hinder half of body and tail grey or grey-brown, with three longitudinal series of small black spots, which may form stripes posteriorly; snout brown, back of the head black; a yellow bar across the interorbital region; belly white, grey, dotted with black, on the sides.

Total length 610 millim.

Mexico and Guatemala.

- |                      |                       |                       |
|----------------------|-----------------------|-----------------------|
| a. ♂ (V. 137; C. ?). | City of Mexico.       | Mr. Doorman [C.].     |
| b. ♂ (V. 157; C. ?). | Vera Paz, low forest. | O. Salvin, Esq. [C.]. |

## 7. DROMICODRYAS.

- Psammophis*, part., *Schleg. Phys. Serp.* ii. p. 201 (1837).
- Herpetodryas*, part., *Dum. & Bibr. Erp. Gén.* vii. p. 203 (1854); *Jan, Elenco sist. Ofid.* p. 80 (1863).

Maxillary teeth 28 to 30, equal; anterior mandibular teeth strongly enlarged. Head elongate, distinct from neck; eye large, with round pupil. Body cylindrical; scales smooth, without pits, in 19 rows; ventrals feebly angulate laterally. Tail long; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Madagascar.

1. *Dromicodryas bernieri*.

- Psammophis moliniger*, var., *Schleg. Phys. Serp.* ii. p. 211 (1837).
- Herpetodryas bernieri*, *Dum. & Bibr.* vii. p. 211, pl. lxxvi. (1854); *Jan, Icon. Gén.* 31, pl. iv. fig. 1 (1869).
- *bernieri*, var. *trilineata*, part., *Boettg. Arch. Senck. Ges.* xii. 1881, p. 443.

Head narrow and elongate; rostral broader than deep, visible from above; internasals as long as deep or a little longer, as long as the præfrontals or a little shorter; frontal narrow, bell-shaped, about twice as long as broad, a little longer than its distance from the end of the snout, as long as the parietals; loreal much longer than deep; one præ- and two (rarely three) postoculars; temporals 1+2 (rarely 2+2); eight upper labials, fourth and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are much shorter than the posterior. Scales in 19 rows. Ventrals 188-203; anal divided (rarely entire); subcaudals 81-111. Dark brown above, with two yellowish stripes two or three scales wide; head with or without light marblings; upper lip yellow; lower parts yellowish or pale olive, the lateral ventral keel with a more or less distinct dark line; chin and throat with or without olive marblings.

Total length 1110 millim.; tail 285.

Madagascar.

a. ♂ (V. 200; C. 93).	Madagascar.	Dr. J. E. Gray [P.].
b, c. ♀ (V. 195, 196; C. 96, ♀).	Madagascar.	
d, e. ♀ (V. 193, 198; C. 97, 100).	Near Tamatave.	Rev. W. D. Cowan [C.].
f. ♀ (V. 203; C. 106).	Betsileo.	Rev. W. D. Cowan [C.].
g-h. ♂ (V. 201, 195; C. 111, 106).	Imerina.	Rev. R. Baron [C.].
i, k. ♂ (V. 192; C. 93) & ♀ (V. 188; C. 81).	East Imerina.	Rev. R. Baron [C.].

## 2. *Dromicodryas quadrilineatus*.

*Herpetodryas quadrilineatus*, Dum. & Bibr. vii. p. 212 (1854).

— *bernieri*, var. *quadrilineatus*, Jan, *Icon. Gén.* 31, pl. iv. fig. 2 (1869); *Boettg. Abh. Senck. Ges.* xi. 1877, p. 9, xi. 1879, p. 463, and xii. 1881, p. 443.

— *bernieri*, var. *trilineata*, part., *Boettg. ll. cc.*

This form is very closely allied to the preceding, of which it has, in fact, been regarded as a variety. However it differs, in addition to the very striking coloration, in having a less narrow head. Ventrals 198 to 216; subcaudals 108 to 122. Pale olive above, with a pair of black dorsal stripes (which may be confluent in the var. *trilineata*) and a narrower lateral one, which gradually disappears on the posterior part of the body and is altogether absent on the tail; head and nape dark brown or blackish above, with six yellowish spots (disposed  $\cdot\cdot\cdot$ ), the anterior pair on the parietal and second temporal shields, the second behind the parietals, and the third just in front of and sometimes confluent with the lateral dorsal stripes; lower parts yellowish, with an interrupted dark line along each lateral ventral keel:

Total length 1020 millim.; tail 300.

Madagascar.

- a, b. ♂ (V. 210; C. 118)      Madagascar.  
     & ♀ (V. 210; C. 113).  
 c. ♂ (V. 198; C. ?)      Imerina.      Rev. R. Baron [C.]

## 8. XENOCHROPHIS.

Tropidonotus, part., *Günth. Cat. Col. Sn.* p. 59 (1858).  
 Xenochrophis, *Günth. Rept. Brit. Ind.* p. 273 (1864); *Bouleng. Faun. Ind., Rept.* p. 353 (1890).

Maxillary teeth about 20, subequal; anterior mandibular teeth largest. Head slightly distinct from neck; eye moderate, with round pupil; nostrils directed upwards, pierced in a single nasal. Body cylindrical; scales keeled, without apical pits, in 19 rows; ventrals rounded. Tail moderate; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

South-eastern Asia.

1. *Xenochrophis cerasogaster*.

*Psammophis cerasogaster*, *Cantor, Proc. Zool. Soc.* 1839, p. 52.  
*Tropidonotus cerasogaster*, *Cantor, Cat. Mal. Rept.* p. 92 (1847);  
*Günth. Cat.* p. 79 (1858).  
*Xenochrophis cerasogaster*, *Günth. Rept. Brit. Ind.* p. 274 (1864);  
*Theob. Cat. Rept. Brit. Ind.* p. 180 (1876); *Bouleng. Faun. Ind., Rept.* p. 353, fig. (1890).  
*Amphiesma schistaceum*, *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 236.

Head narrow, elongate, with angular canthus rostralis and slightly concave lores; eye moderate or rather small. Rostral once and one third to twice as broad as long; suture between the internasals nearly as long as that between the prefrontals; frontal narrow, much longer than its distance from the end of the snout, as long as the parietals; loreal as long as deep or a little longer than deep; one preocular; two or three postoculars and one or two suboculars; temporals 2+2 or 2+3; nine upper labials, fourth entering the eye; five or six lower labials in contact with the anterior chin-shields, which are as long as or a little shorter than the posterior. Scales strongly keeled, in 19 rows. Ventrals 140-151; anal divided; subcaudals 60-79. Brown above, with or without darker spots and with a more or less distinct paler dorso-lateral stripe; lower parts cherry-red to purplish black, with a yellow stripe on each side extending from the lips to the end of the tail.

Total length 600 millim.; tail 140.

From Bengal, Assam, and the Khasi Hills to the Malay Peninsula.

- a-f. ♀ (V. 149, 151, 146, 150, India.  
     145; C. 72, 68, 66, 68, ?) & yg.  
     (V. 140; C. 70).  
 g. ♂ (V. 140; C. 76).      Khasi Hills.      Sir J. Hooker [P.].  
 h. ♂ (V. 141; C. 70).      Pinang.      Dr. Cantor.

9. **PRYMNOMIODON.**

*Prymnomiodon*, Cope, *Proc. Ac. Philad.* 1860, p. 558; *Günth. Rept. Brit. Ind.* p. 274 (1864).

Maxillary teeth minute posteriorly, becoming much longer anteriorly. Head moderately distinct from neck. Eye rather large, with round pupil. Body slender; scales keeled, in 19 rows; ventrals rounded. Subcaudals in two rows.

Siam.

1. ***Prymnomiodon chalceus*.**

*Prymnomiodon chalceus*, Cope, *l. c.*; *Günth. l. c.*

Snout rather narrow. Rostral nearly as deep as broad; nostril between two nasals, which are equal in size; frontal rather large; loreal trapezoid; one præocular, not reaching the frontal; three postoculars; eight upper labials, fourth and fifth entering the eye; posterior chin-shields longer than the anterior. Scales in 19 rows, elongate, all keeled. Ventrals 152; anal entire; subcaudals — ? (tail mutilated). Olivaceous above, shading into leek-green upon the flanks, and greenish white upon the belly; a vertebral stripe of light green bordered with black extends from the parietal shields to the origin of the tail, involving one row of scales and two halves; another narrower and paler stripe extends from the third and fourth rows of scales upon each side from the neck to the origin of the tail; this stripe is bounded above by an interrupted narrow black border; temporal region bright green, shields of head tinged with fulvous; upper labials and præocular white; a narrow black post-ocular vitta.

Length of body 300 millim.

Siam.

Judging from the description, this Snake appears to resemble closely the American *Tropidonotus saurita*, from which, however, the dentition distinguishes it.

Under the name of

**TROPIDONOTUS NICOBARIENSIS,**

*W. L. Sclater, Journ. As. Soc. Beng.* lx. 1891, p. 241, pl. vi. fig. 5,

a young Snake from Camorta, Nicobars, is described and referred with doubt to the genus *Tropidonotus*, which agrees well in most respects with *Prymnomiodon chalceus* but for the division of the anal shield and the isodont (?) dentition. It has 132 ventrals and 119 subcaudals.

10. **TROPIDONOTUS.**

*Natrix*, part., *Laur. Syn. Rept.* p. 73 (1768).

*Tropidonotus*, *Kuhl, in Férussac, Bull. Sc. Nat.* ii. 1824, p. 81; *Boie, Isis*, 1827, p. 518.

*Tropidonotus*, part., *Schleg. Phys. Serp.* ii. p. 297 (1837); *Dum. &*



- Bibr. Exp. Gén.* vii. p. 549 (1854); *Günth. Cat. Col. Sn.* p. 59 (1858), and *Rept. Brit. Ind.* p. 258 (1864); *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 203; *Bouleng. Faun. Ind., Rept.* p. 341 (1890).
- Natrix*, *Bonap. Mem. Acc. Torin.* (2) ii. 1839, p. 436; *Cope, Proc. U.S. Nat. Mus.* xi. 1838, p. 392, and xiv. 1892, p. 667.
- Eutania*, *Baird & Gir. Cat. N. Am. Rept.* p. 24 (1853); *Cope, Proc. U.S. Nat. Mus.* xiv. 1892, p. 645.
- Nerodia*, *Baird & Gir. l. c.* p. 33.
- Regina*, *Baird & Gir. l. c.* p. 45.
- Leptophis*, part., *Dum. & Bibr. t. c.* p. 528.
- Amphiesma*, part., *Dum. & Bibr. t. c.* p. 724; *Jan, l. c.* p. 232.
- Thamnophis*, *Cope, Proc. Ac. Philad.* 1860, p. 369.
- Herpetoreas*, *Günth. Proc. Zool. Soc.* 1860, p. 156, and *Rept. Brit. Ind.* p. 257.
- Natrix*, *Günth. Ann. & Mag. N. H.* (3) ix. 1862, p. 124.
- Thamnophis*, part., *Jan, Elenco sist. Ofid.* p. 82 (1863).
- Neusterophis*, *Günth. Proc. Zool. Soc.* 1863, p. 16.
- Styporhynchus*, *Peters, Mon. Berl. Ac.* 1863, p. 399.
- Tropidophorus* (*non D. & B.*), *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 205.
- Tropidonophis*, *Jan, l. c.* p. 245.
- Fowlea*, *Theob. Cat. Rept. As. Soc. Mus.* p. 57 (1868).
- Chilopoma*, *Cope, in Wheeler's Rep. Explor. Surv. W. 100th Mer.* v. p. 543 (1875).
- Katophis*, *Macleay, Proc. Linn. Soc. N.S.W.* ii. 1877, p. 36.
- Atomarchus*, *Cope, Am. Nat.* 1883, p. 1300.
- Bothrodytes*, *Cope, Proc. Am. Philos. Soc.* xxiii. 1886, p. 495.
- Coluber*, *Cope, Bull. U.S. Nat. Mus.* no. 32, 1887, p. 59.
- Stypocemus*, *Cope, Proc. Am. Philos. Soc.* xxiii. 1886, p. 495.

Maxillary teeth 18 to 40, posterior longest; mandibular teeth subequal. Head usually distinct from neck; eye rather small, moderate, or large, with round pupil. Body more or less elongate, cylindrical; scales mostly keeled, in some species smooth, usually with apical pits, in 15 to 33 rows; ventrals rounded. Tail moderate or long; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Europe; Asia; Africa; North Australia; North and Central America.

#### *Synopsis of the Species.*

I. Maxillary teeth not more than 30, the hinder gradually enlarged; eyes and nostrils lateral; internasal shields broadly truncate anteriorly. (TROPIDONOTUS.)

A. Anal shields single; a single anterior temporal\*.

1. Second row of scales keeled.

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\* *Eutania nigrolateris*, Brown, with three anterior temporals, is probably based on an anomalous individual.



a. Eye rather small; frequently two præoculars. [p. 201.  
 Scales in 17 or 19 rows; ventrals 139-152. 1. *leptocephalus*,  
 Scales in 21 or 23 rows; ventrals 152-172. 2. *vagrans*, p. 202.

b. Eye moderate or large; a single præocular. [p. 203.

a. Scales in 17 rows, all keeled. 3. *chrysocephalus*,

β. Scales in 19 or 21 rows, the keel on the outer scale, if present, weaker than on the others; subcaudals not more than 100.

Frontal hardly once and a half as long as broad; second row of scales feebly keeled..... 4. *scaliger*, p. 203.

Frontal at least twice as long as broad .. 5. *scalaris*, p. 204.

Frontal once and a half to once and three fourths as long as broad ..... 6. *ordinatus*, p. 205.

γ. Scales in 19 rows, all with equally strong keels; subcaudals 86-127 ..... 7. *saurita*, p. 212.

c. Eye moderate; two or three præoculars. [p. 214.  
 8. *multimaculatus*,

2. Second row of scales smooth .... 9. *rufopunctatus*, [p. 214.

B. Anal entire; two superposed anterior temporals.

10. *pealii*, p. 214.

C. Anal divided.

1. Scales in 15 or 17 rows; usually a single anterior temporal.

a. 8 upper labials, usually three entering the eye; scales keeled.

Scales strongly keeled; subcaudals more than 50 ..... 11. *picturatus*, p. 215.

Scales feebly keeled, smooth on nape; 2 postoculars..... 12. *truncatus*, p. 216.

Scales feebly keeled, smooth on nape; 3 postoculars..... 13. *celebicus*, p. 216.

b. 8 upper labials, two entering the eye; scales smooth.

Scales in 17 rows ..... 14. *fuliginoides*, p. 217.

Scales in 15 rows ..... 15. *variegatus*, p. 217.

c. 6 upper labials, two entering the eye.

Scales strongly keeled; head narrow and elongate ..... 16. *swinhonis*, p. 218.

Scales very feebly keeled; a groove along the middle of the nape ..... 17. *nuchalis*, p. 218.

## 2. Scales in 19 rows.

## a. Usually a single anterior temporal.

a. Usually 7 upper labials, third and fourth entering the eye.

- Ventrals 157-190 ..... 18. *natrix*, p. 219.  
 Ventrals 127-151 ..... 19. *vibakari*, p. 221.

β. 8 or 9 upper labials, three entering the eye. [p. 222.

- Ventrals 138-147; subcaudals 40-53 .... 20. *conspicillatus*,  
 Ventrals 163-175; subcaudals 73-95 .... 21. *parallelus*, p. 223.  
 Ventrals 150-154; subcaudals 80-100 .. 22. *khasiensis*, p. 223.

b. Two anterior temporals; 9 upper labials, fourth to sixth entering the eye.

- Frontal once and a half to once and three fourths as long as broad. .... [p. 224.  
 23. *trianguligerus*,  
 Frontal once and one third as long as broad. 24. *petersii*, p. 225.

II. Maxillary teeth not more than 30, the hinder gradually enlarged; eyes rather small and, like the nostrils, directed upwards and outwards; internasals usually much narrowed in front. (NERODIA.)

A. Anal single; a single anterior temporal; scales in 19 rows.

- [p. 225.  
 Scales strongly keeled ..... 25. *melanogaster*,  
 Scales smooth..... 26. *levissimus*, p. 226.

B. Anal divided.

1. Scales smooth or feebly keeled, in 17 or 19 rows.

- Scales smooth, in 19 rows; a single anterior temporal ..... 27. *olivaceus*, p. 227.  
 Scales smooth or faintly keeled, in 17 rows; a single anterior temporal..... 28. *pygæus*, p. 228.  
 Scales smooth or faintly keeled, in 17 rows; two anterior temporals ..... 29. *punctulatus*, p. 228.  
 Scales feebly keeled, in 19 rows; three labials entering the eye..... 30. *modestus*, p. 228.  
 Scales feebly keeled, in 19 rows; one or two labials entering the eye ..... [p. 230.  
 31. *sancti-johannis*,

2. Scales in 19 rows, strongly keeled; usually two anterior temporals; 4th, 5th, or 4th and 5th labials entering the eye; ventrals not more than 161.

- Scales of 2 or 3 outer rows smooth ..... 32. *piscator*, p. 230.

Only the outer row of scales smooth; ventrals 130-146; subcaudals 64-92 . . . . 33. *asperrinus*, p. 232.

Only the outer row of scales smooth; usually a single labial entering the eye; ventrals 145-161; subcaudals 54-69 . . 34. *annularis*, p. 233.

3. Scales in 19 to 23 rows, strongly keeled; a single anterior temporal; one or two labials entering the eye.

a. Head distinct from neck.

α. Ventrals 160-197; scales in 19 rows; 4th, or 4th and 5th labials entering the eye.

35. *tessellatus*, p. 233.

β. Ventrals 147-160; scales in 21 or 23 rows; 3rd and 4th labials entering the eye.

36. *viperinus*, p. 235.

γ. Ventrals 126-147; scales in 19 or 21 rows; 4th and 5th labials entering the eye.

Frontal twice as long as broad; scales usually in 19 rows, outer row faintly keeled . . . . . 37. *validus*, p. 237.

Frontal once and two thirds to twice as long as broad; scales in 21 rows, outer row distinctly keeled . . . . . 38. *clarkii*, p. 238.

Frontal broad; tail compressed at the base . . . . . 39. *compressicauda*, [p. 238.]

b. Head small, not or but scarcely distinct from neck; scales in 19 or 21 rows; third and fourth labials entering the eye.

Frontal hardly once and a half as long as broad; ventrals 140-151; subcaudals 64-86 . . . . . 40. *septemvittatus*, [p. 239.]

Frontal twice as long as broad; ventrals 132-142; subcaudals 51-71 . . . . . 41. *rigidus*, p. 240.

Frontal once and two thirds to twice as long as broad; ventrals 156-173; subcaudals 47-65 . . . . . 42. *grahami*, p. 240.

4. Scales in 21 to 27 rows; not more than one labial entering the eye.

Eye separated from the labials by suboculars; frontal once and one third to once and a half as long as broad . . . . . 43. *ferox*, p. 241.

Eye separated from the labials by suboculars; frontal elongate . . . . . 44. *anoscopus*, p. 242.

Fourth labial entering the eye . . . . . 45. *fasciatus*, p. 242.

## 5. Scales in 29 to 33 rows.

- Eye separated from the labials by suboculars ..... 46. *cyclopium*, p. 244.  
 Fourth labial entering the eye ..... 47. *taxispilotus*, p. 245.

## III. Maxillary teeth not more than 30, last two or three abruptly enlarged. (AMPHIESMA.)

## A. Head moderately elongate.

## 1. Scales in 17 rows, smooth.

- Rostral nearly as broad as deep; eye rather small ..... 48. *sexlineatus*, p. 246.  
 Rostral much broader than deep; eye rather large ..... 49. *dolichocercus*, [p. 246.]

## 2. Scales in 19 rows, smooth or feebly keeled.

- 2 labials entering the eye; frontal once and a half as long as broad ..... 50. *stumpffii*, p. 247.  
 2 labials entering the eye; frontal once and two thirds to twice as long as broad.... 51. *lateralis*, p. 248.  
 3 labials entering the eye ..... 52. *platyceps*, p. 248.

## 3. Scales in 19 rows, strongly keeled.

## a. Two labials entering the eye.

- a. 7 upper labials, 3rd and 4th entering the eye; usually a single anterior temporal.. 53. *tigrinus*, p. 249.

- β. 8 upper labials, 4th and 5th entering the eye; usually two anterior temporals.

- Subcaudals 121-128 ..... 54. *pryeri*, p. 250. [p. 251.]  
 Subcaudals 79-90 ..... 55. *himalayanus*,  
 Subcaudals 48-54 ..... 56. *ceylonensis*, p. 252.

## b. Three labials entering the eye.

## a. A single anterior temporal.

- \* Outer row of scales smooth.

- † Internasals broadly truncated anteriorly.  
 57. *beddomii*, p. 252.

- †† Internasals much narrowed anteriorly.

- 3rd to 5th labials entering the eye ..... 58. *stolatus*, p. 253.  
 4th to 6th labials entering the eye ..... 59. *vittatus*, p. 255.

\*\* Outer row of scales keeled; 4th and 6th labials entering the eye . . . . . 60. *nigrocinctus*, p. 255.

β. Two anterior temporals.

\* Eye moderate or large.

† Frontal shorter than parietals.

‡ Internasals shorter than præfrontals; outer row of scales smooth or feebly keeled.

3rd to 5th labials entering the eye . . . . . 61. *subminiatus*, p. 256.

4th to 6th labials entering the eye . . . . . 62. *spilogaster*, p. 257.

‡‡ Internasals as long as præfrontals; outer row of scales keeled . . . . . 63. *chrysargus*, p. 258.

†† Frontal as long as parietals.

64. *monticola*, p. 259.

\*\* Eye very large; subcaudals 95–113.

65. *maculatus*, p. 260.

4. Scales in 21 rows . . . . . 66. *chrysargoides*,  
[p. 260.]

B. Head short, very distinct from neck.

1. Scales in 17 rows, all strongly keeled; 3rd to 5th labials entering the eye.

Internasals not longer than præfrontals . . 67. *saravacensis*, p. 261.

Internasals longer than præfrontals . . . . . 68. *auriculatus*, p. 261.

2. Scales in 19 rows, all strongly keeled.

[p. 262.]

Subcaudals 96–101 . . . . . 69. *crebripunctatus*,

Subcaudals 66 . . . . . 70. *lineatus*, p. 262.

3. Scales in 19 or 21 rows, outer row smooth or feebly keeled.

Scales in 19 rows; two labials entering the eye . . . . . 71. *flavifrons*, p. 263.

Scales in 21 rows; three labials entering the eye . . . . . 72. *callistus*, p. 263.

IV. Maxillary teeth 35–40, posterior but slightly enlarged; eye very large; body very slender. (ΜΑΚΡΟΡΗΝΙΣ.)

5th and 6th labials entering the eye; ventrals 196 . . . . . 73. *hypomelas*, p. 264.

4th to 6th labials entering the eye; ventrals 157 . . . . . 74. *dendrophlops*,  
[p. 264]



Owing to the difficulty, in some cases, of ascertaining the type of dentition, the preceding synopsis may not fulfil its purpose. It is therefore supplemented by the following tabulation of the numbers of shields and scutes, which may not unfrequently more readily assist in the identification of a specimen.

## I. European, North African, and West Asian species.

	Sc.	V.	A.	C.	Pr. oc.	Pt. oc.	Lab.	Ant. temp.
<i>natrix</i> .....	19	157-190	2	50-88	1-2	2-4	7	1
<i>tessellatus</i> .....	19	100-197	2	48-86	1-3	3-5	8	1
<i>viperinus</i> .....	21-23	147-160	2	47-72	1-2	2	7	1

## II. Asian and Australasian species.

	Sc.	V.	A.	C.	Pr. oc.	Pt. oc.	Lab.	Ant. temp.
<i>pealii</i> .....	19	142-144	1	75-77	1-2	2-3	9	2
<i>picturatus</i> .....	15-17	128-165	2	52-82	1-2	2-3	8	1-2
<i>truncatus</i> .....	15	142-147	2	43	2	2	8	1
<i>celebicus</i> .....	15	140	2	48	2	3	8	1
<i>swinhonis</i> .....	15	150	2	50	1	3	6	1
<i>nuchalis</i> .....	15	154-165	2	46-50	1	2-3	6	1
<i>vibakari</i> .....	19	127-151	2	59-79	1-2	2-3	7-8	1
<i>conspicillatus</i> .....	19	138-147	2	40-53	1	3	8	1
<i>parallelus</i> .....	19	163-175	2	73-95	1-3	3	7-8	1-2
<i>khasiensis</i> .....	19	150-154	2	80-100	1-2	3	9	1
<i>trianguligerus</i> .....	19	134-147	2	67-94	1-2	3-4	9	2
<i>petersii</i> .....	19	140-150	2	65-78	1	3-4	9	2
<i>punctulatus</i> .....	17	142-154	2	62-83	1	2-3	9-10	2
<i>modestus</i> .....	19	154-168	2	96-122	1-2	2-3	9	1-2
<i>sancti-johannis</i> .....	19	134-158	2	85-98	1	3	9	2
<i>piscator</i> .....	19	125-150	2	70-90	1	3-4	9	1-2
<i>asperrimus</i> .....	19	130-146	2	64-95	1	3	9	2
<i>annularis</i> .....	19	145-161	2	54-69	1	2-3	8-9	1-2
<i>platyceps</i> .....	19	177-235	2	75-107	1-2	2-3	8	1-2
<i>tigrinus</i> .....	19	147-166	2	55-84	2	3-4	7	1-2
<i>pryeri</i> .....	19	171-181	2	114-128	1	3	8	1-2
<i>himalayanus</i> .....	19	158-170	2	79-90	1-2	2-3	8-9	1-2
<i>ceylonensis</i> .....	19	133-141	2	48-54	2	3	8	2
<i>beddomii</i> .....	19	131-150	2	65-75	1	2-3	8-9	1
<i>solatus</i> .....	19	120-161	2	50-89	1	3	8	1
<i>vittatus</i> .....	19	140-149	2	53-84	1	3	9	1
<i>nigrocinclus</i> .....	19	155-160	2	81-89	1-2	3	9	1-2
<i>subminiatus</i> .....	19	132-166	2	65-87	1	3	8	2
<i>spilogaster</i> .....	19	148-156	2	75-92	1-2	3-4	9	2
<i>chrysargus</i> .....	19	143-175	2	60-93	1-2	3	8-9	2
<i>monticola</i> .....	19	134-142	2	80-92	1	3	8	2
<i>maculatus</i> .....	19	144-156	2	95-113	1	3	9	2
<i>chrysargoides</i> .....	21	154-161	2	64-79	1	3	9	2
<i>saravacensis</i> .....	17	140-154	2	52-89	1	3	8	2

## II. (continued).

	Sc.	V.	A.	C.	Pr. oc.	Pt. oc.	Lab.	Ant. temp.
<i>auriculatus</i> .....	17	152-157	2	76-91	1-2	3	8	2
<i>crebripunctatus</i> .....	19	148-166	2	96-101	2	3	8-10	2
<i>lineatus</i> .....	19	142	2	66	2	3	8	1
<i>flavifrons</i> .....	19	146-155	2	95-99	1	2-3	8-9	2
<i>callistus</i> .....	21	156	2	76	1	4	9	2
<i>hypomelas</i> .....	17	196	2	99-105	2	3	9	2
<i>dendrophlops</i> .....	17	157	2	100	1-2	3	9	2

## III. African and Malagasy species.

	Sc.	V.	A.	C.	Pr. oc.	Pt. oc.	Lab.	Ant. temp.
<i>fuliginoides</i> .....	17	119-135	1-2	75-95	1-2	3	8	1
<i>variegatus</i> .....	15	143	2	76	2	3	8	1
<i>lævissimus</i> .....	19	175	1	76	1	2	8	1
<i>olivaceus</i> .....	19	131-149	2	55-85	1-2	2-3	8	1
<i>ferox</i> .....	21-27	137-155	2	60-73	1-2	2	9	1
<i>sexlineatus</i> .....	17	143-157	2	72-152	1-2	2	8	1
<i>dolichocercus</i> .....	17	148-156	2	97-160	1	2-3	8	1
<i>stumpffi</i> .....	19	147-169	2	68-104	1-2	2	8	2
<i>lateralis</i> .....	19	149-165	2	78-93	1	2	8	1-2

## IV. American species.

	Sc.	V.	A.	C.	Pr. oc.	Pt. oc.	Lab.	Ant. temp.
<i>leptocephalus</i> .....	17-19	139-152	1	54-70	1-2	3	6-8	1
<i>vagrans</i> .....	21-23	152-179	1	53-90	1-2	3-4	7-8	1
<i>chrysocephalus</i> .....	17	145-151	1	71-81	1	3	8	1
<i>scaliger</i> .....	19	141-158	1	46-56	1	2-3	7	1
<i>scalaris</i> .....	19	130-145	1	52-75	1	2-3	7	1
<i>ordinatus</i> .....	19-21	137-176	1	44-100	1	3-4	7-8	1
<i>saurita</i> .....	19	144-178	1	86-127	1	3-4	7-8	1
<i>multimaculatus</i> .....	21	.....	1	.....	2-3	3	8	1
<i>rufopunctatus</i> .....	21	177	1	87	1	3	8	1
<i>melanogaster</i> .....	19	140-159	1	45-79	2-3	2-4	8	1
<i>pygæus</i> .....	17	120-133	2	35-54	1	2	8	1
<i>validus</i> .....	19-21	136-147	2	66-83	1-2	2-3	8	1
<i>clarkii</i> .....	21	129-132	2	57-70	1	2-3	8	1
<i>compressicauda</i> .....	19-21	126-137	2	66-81	1	2-3	8	1
<i>septemvittatus</i> .....	19	140-151	2	64-86	2	2	7	1
<i>rigidus</i> .....	19	132-142	2	51-71	2	2	7	1
<i>grahami</i> .....	19-21	156-173	2	45-65	2	2-3	7	1
<i>anoscopus</i> .....	23	143	2	73	1	2	9	1
<i>fuscatus</i> .....	23-27	128-154	2	58-82	1-2	2-3	8	1
<i>cyclopium</i> .....	29-31	132-150	2	60-79	1-2	2-3	8	1
<i>taxispilotus</i> .....	29-33	130-144	2	70-83	1	2	8	1-2

I. TROPIDONOTUS.—Maxillary teeth not more than 30, the hinder gradually enlarged (see fig. 11, p. 170). Eyes and nostrils lateral; internasal shields broadly truncate anteriorly.

### 1. *Tropidonotus leptocephalus*.

*Eutainia leptocephala*, Baird & Gir. *Cat. N. Am. Rept.* p. 29 (1853); *Gir. U.S. Explor. Exped., Herp.* p. 151, pl. xiii. figs. 7–13 (1858); *Cooper, Rep. U.S. Explor. Surv. R. R.* xii. pt. ii. p. 297 (1860); *Cope, in Wheeler's Rep. U.S. Surv. W. 100th Mer.* v. p. 550 (1875), and *Proc. Ac. Philad.* 1883, p. 23, and *Proc. U.S. Nat. Mus.* xiv. 1892, p. 660.

*Tropidonotus ordinatus*, part., Günth. *Cat.* p. 73 (1858).

*Eutainia cooperi*, Kennicott, *Rep. U.S. Explor. Surv. R. R.* xii. pt. ii. p. 296, pl. xv. fig. 1 (1860); *Cope, Wheeler's Rep.* p. 551.

— *atrata*, Kennicott, *l. c.* p. 296; *Cope, l. c.*

*Tropidonotus cooperi*, Jan, *Arch. Zool. Anat. Phys.* ii. 1865, p. 212.

— *sirtalis*, var. *leptocephala*, Jan, *Icon. Gén.* 35, pl. iv. fig. 2 (1867); *Garm. N. Am. Rept.* p. 139 (1883).

— *sirtalis*, var. *infernalis*, part., *Garm. l. c.* p. 24.

Eye rather small, considerably smaller than in *T. ordinatus*; head rather elongate, but slightly distinct from neck. Rostral broader than deep, visible from above; internasals as long as broad or broader, a little shorter than the præfrontals; frontal once and a half to once and two thirds as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal usually longer than deep; two (rarely one) præ- and three post-oculars; temporals 1+2; seven (rarely six or eight) upper labials, third and fourth entering the eye; four lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 17 (rarely 19) rows, strongly keeled, outer row smooth or feebly keeled. Ventrals 139–152; anal entire; subcaudals 54–70. Olive or brown above, with small black spots, with or without three more or less distinct light longitudinal streaks, the median yellow or orange, the laterals greenish yellow; upper lip yellowish; usually a black streak behind the eye, and sometimes a black blotch on each side of the occiput; usually a pair of yellow dots close together on the suture between the parietal shields; lower parts olive or plumbeous grey, with or without black dots.

Total length 600 millim.; tail 140.

North America west of the Rocky Mountains, from British Columbia to North California.

#### A. Scales in 17 rows; light dorsal stripes distinct.

*a-h.* ♂ (V. 145, 149, 147, 148; Sumass Prairies, Boundary Commis-  
C. 66, 60, 62, 64), ♀ (V. 139; Brit. Columbia. sion [C.].  
C. 60), hgr. (V. 146; C. 51),  
& yg. (V. 146, 141; C. 56,  
60).

*i-m.* ♂ (V. 149, 147; C. 63, Vancouver Id. H.M.S. 'Plumper.'  
68), ♀ (V. 150; C. 56), &  
yg. (V. 139; C. 58).

n. Yg. (V. 145; C. 67).	Vancouver Id.	Col. Hawkins [C.].
o. ♀ (V. 142; C. 56).	Victoria.	Dr. Brown [C.].
p. ♂ (V. 149; C. 70).	Oregon.	Smithsonian Inst. [P.]. (As <i>E. cooperi</i> .)

## B. Scales in 17 rows; no stripes.

q. Hgr. (V. 141; C. 56).	Sumass Prairies, Brit. Columbia.	Boundary Commis- sion.
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## C. Scales in 19 rows; light dorsal stripes distinct.

r. Yg. (V. 140; C. 54).	N. Orca Id., Gulf of Georgia.	Lords of the Ad- miralty [P.].
s-t. ♂ (V. 144; C. 65) & ♀ (V. 152; C. 60).	California.	Haslar Collection.

## D. Scales in 19 rows; no stripes.

u. ♀ (V. 145; C. 61).	California.	Haslar Collection.
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2. *Tropidonotus vagrans*.

*Eutainia vagrans*, Baird & Gir. *Cat. N. Am. Rept.* p. 35 (1853); and *Rep. U.S. Explor. Surv. R. R.* x. pt. iii., *Zool.* p. 19, pl. xvii. (1857); Girard, *U.S. Explor. Exped., Herp.* p. 154, pl. xiv. figs. 5-10 (1858); Cope, *Proc. Ac. Philad.* 1866, pp. 305, 307, and in *Wheeler's Rep. U.S. Surv. W. 100th Mer.* v. p. 545 (1875); Coues, *Wheeler's Rep.*, t. c. p. 614, pl. xx. fig. 2; Coues & Yarrow, *Bull. U.S. Geol. Surv.* iv. 1878, p. 274; H. Garm. *Bull. Illin. Lab.* iii. 1892, p. 268.

*Tropidonotus ordinatus*, part., Günth. *Cat.* p. 73 (1858).

— *vagrans*, Jan, *Arch. Zool. Anat. Phys.* iii. 1865, p. 215.

— *sirtalis*, var. *vagrans*, Garm. *N. Am. Rept.* p. 139 (1883).

*Eutæmia biscutata*, Cope, *Proc. Ac. Philad.* 1883, p. 21.

— *vagrans plutonia*, Yarrow, *Proc. U.S. Nat. Mus.* vi. 1883, p. 152.

— *elegans*, part., Cope, *Proc. U.S. Nat. Mus.* xiv. 1892, p. 651.

— *elegans brunnea et lineolata*, Cope, *l. c.*

Eye rather small, considerably smaller than in *T. ordinatus*. Rostral broader than deep, visible from above; internasals as long as broad, as long as or a little shorter than the præfrontals; frontal once and a half to once and two thirds as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal as long as deep or a little longer; one or two præ- and three (rarely four) postoculars; temporals 1+2; eight (rarely seven) upper labials, fourth and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are usually about as long as the posterior. Scales in 21 rows (rarely 23, specs. *l* and *p*), strongly keeled, outer row more or less distinctly keeled. Ventrals 152-179; anal entire; subcaudals 53-90. Olive above, with four series of black spots and two or three more or less distinct yellowish longitudinal streaks; a large black blotch on each side behind the occiput; upper surface of head and nape sometimes black; a pair



of yellow dots close together on the suture between the parietal shields; lower parts olive or grey, uniform or spotted or marbled with black.

Total length 770 millim.; tail 170.

North America west of the Rocky Mountains.

- |  |   |  |
|--|---|--|
| a. ♂ (V. 163; C. 79).  | Banff, Rocky Mountains.                                 | Prof. C. Eigenmann [C.].                           |
| b. ♂ (V. 168; C. 72).  | Near Wales Cañon, Pueblo Co., Colorado, 6000-7000 feet. | T. D. A. Cockerell, Esq. [P.].                     |
| c. ♂ (V. 175; C. 86).  | Kansas.   | } Smithsonian Inst. [P.]. (As <i>E. vagrans</i> .) |
| d. ♂ (V. 172; C. 87).  | Washington Territory.                                   |  |
| e-k, l. ♂ (V. 167, 168; C. 70), hgr. (V. 164, 152, 159; C. 74, 69, 8), & yg. (V. 167, 162; C. 68, 81). | Sumass Prairies, British Columbia.                      | Boundary Commission.                               |
| m. Yg. (V. 161; C. 77).  | Vancouver Island.                                       | Col. Hawkins [C.].                                 |
| n. ♂ (V. 165; C. 73).  | Victoria.   | Dr. Brown [C.].                                    |
| o, p. Hgr. ♂ (V. 167; C. 80) & ♀ (V. 166; C. 75).  | N. Orca Island, Gulf of Georgia.                        | Lords of the Admiralty [P.].                       |
| q-r. ♂ (V. 166, 172; C. 87, ?).  | Iia Juana, San Diego Co., California.                   | Prof. C. Eigenmann [C.].                           |

### 3. *Tropidonotus chrysocephalus*.

*Eutania chrysocephala*, Cope, *Proc. Am. Philos. Soc.* xxii. 1884, p. 173.

Eye large. Rostral broader than deep; internasals as long as broad, a little shorter than the prefrontals; frontal narrow; loreal deeper than long; one præ- and three postoculars; temporals 1+2; eight upper labials, fourth and fifth entering the eye. Scales in 17 rows, all strongly keeled. Ventrals 145-151; anal entire; subcaudals 71-81. Head yellow or brown; a large black nuchal spot; no dorsal stripe; a lateral series of light spots, or a whitish stripe along the second row of scales may be present; ventrals olive, with or without black bases, or entirely black.

Total length 450 millim.; tail 135.

South Mexico.

- |  |                             |   |
|--|-----------------------------|---|
| a-c. ♂ (V. 151, 142; C. 81, 79) & yg. (V. 145; C. 76). | Omiteme, Guerrero, 8000 ft. | Mr. H. H. Smith [C.].<br>F. D. Godman, Esq. [P.]. |
| d. ♀ (V. 148; C. 71).                                  | Amula, Guerrero, 8000 ft.   | Mr. H. H. Smith [C.].<br>F. D. Godman, Esq. [P.]. |

### 4. *Tropidonotus scaliger*.

*Tropidonotus scaliger*, Jan, *Arch. Zool. Anat. Phys.* iii. 1865, p. 214.  
*Eutania scalaris*, Duges, *La Natureza*, (2) i. 1888, p. 129, pl. xiii. fig. 17.

Head short; eye moderate. Rostral broader than deep, just



visible from above; internasals broader than long, shorter than the præfrontals; frontal hardly once and a half as long as broad, a little longer than its distance from the end of the snout, slightly shorter than the parietals; loreal trapezoid, as long as deep; one præ- and two or three postoculars; temporals 1+2; seven upper labials, third and fourth entering the eye; four lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows, very strongly keeled, outer row perfectly smooth, second row feebly keeled. Ventrals 141-158; anal entire; subcaudals 46-56. Brown above, scales of the vertebral series yellow; a rather ill-defined light lateral streak; regular dark brown cross bars between the light stripes; head with dark brown symmetrical markings; a yellowish streak from the parietals to the angle of the mouth; upper lip yellow, the shields edged with black; greyish olive inferiorly, ventrals blackish at the base.

Total length 370 millim.; tail 65.

Mexico.

- |                       |                 |                             |
|-----------------------|-----------------|-----------------------------|
| a. ♀ (V. 141; C. 46). | City of Mexico. | Mr. Doorman [C.].           |
| b. ♂ (V. 158; C. 56). | S. Mexico.      | F. D. Godman, Esq.<br>[P.]. |

### 5. *Tropidonotus scalaris*.

*Thamnophis scalaris*, Cope, *Proc. Ac. Philad.* 1860, p. 369.

*Eutænia scalaris*, Cope, *Proc. Ac. Philad.* 1866, p. 306.

Head narrow, scarcely distinct from neck; eye rather large. Rostral broader than deep, visible from above; internasals broader than long, shorter than the præfrontals; frontal twice to twice and one fourth as long as broad, much longer than its distance from the end of the snout, slightly shorter than the parietals; loreal as long as deep or a little deeper than long; one præ- and two or three postoculars; temporals 1+2; seven upper labials, third and fourth entering the eye; four lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows, strongly keeled, outer row smooth or faintly keeled. Ventrals 130-145; anal entire; subcaudals 52-75. Brown above, with a yellow or orange vertebral line, and a light lateral streak on the second or second and third rows of scales; blackish-brown cross bars disposed regularly between the light stripes; greyish olive or plumbéous grey inferiorly.

Total length 550 millim.; tail 125.

Mexico.

- |   |   |                           |
|---|---|---------------------------|
| a. ♂ (V. 130; C. 75).   | Oaxaca.   | Mr. Hooge [C.].           |
| b-d, e. ♂ (V. 141, 140;<br>C. 63, 71), hgr. ♀ (V.<br>143; C. 57), & yg.<br>(V. 139; C. 52). | La Cumbre de los Arras-<br>trados, Talpa Mascota,<br>Jalisco. | Dr. A. C. Buller<br>[C.]. |
| f-h. ♂ (V. 139, 140; C.<br>65, 65) & ♀ (V. 145;<br>C. 61).                                  | Colonia Brizuela, Hda. El<br>Rosario, Autlan, Jalisco.        | Dr. A. C. Buller<br>[C.]. |

6. *Tropidonotus ordinatus*.

- Coluber ordinatus*, *Linn. S. N. i.* p. 379 (1766).  
*Tropidonotus bipunctatus*, *Schleg. Phys. Serp.* ii. p. 320 (1837);  
*Dum. & Bibr.* vii. p. 582 (1854).  
 — *ordinatus*, part., *Günth. Cat.* p. 73 (1858).  
 — *sirtalis*, part., *Jan, Arch. Zool. An. Phys.* iii. 1865, p. 210;  
*Garm. N. Am. Rept.* p. 24 (1883).  
*Eutænia sirtalis*, *Cope, Wheeler's Rep. U.S. Surv. W. 100th Mer.*  
 v. p. 546 (1875), and *Proc. U.S. Nat. Mus.* xiv. 1892, p. 661.

Eye moderate or rather large. Rostral broader than deep, visible from above; internasals as long as broad or broader, as long as or shorter than the præfrontals; frontal once and a half to once and three fourths as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal about as long as deep; one præ- and three (rarely four) postoculars; temporals 1+2 or 1+3; seven or eight upper labials, two entering the eye; five (rarely four) lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 or 21 rows, strongly keeled; the keel on the outer scale, if present, weaker than on the others. Ventrals 137-176; anal entire; sub-caudals 44-100. Coloration very variable; a pair of light dots on the suture between the parietal shields is nearly constant.

Total length 950 millim.; tail 190.

North and Central America.

This species may be divided into numerous forms or varieties, of which the following are the principal:—

I. Lateral stripe, if distinct, running along the second and third rows of scales.

A. Scales in 19 rows (exceptionally 21).

1. Seven upper labials, third and fourth entering the eye; scales of outer row keeled.

No vertebral stripe ..... A. *Forma typica*.

A light vertebral stripe ..... B. *sirtalis*.

2. Seven or eight upper labials; scales of outer row smooth or feebly keeled; a light vertebral stripe, occupying one and two half scales ..... C. *infernalis*.

3. Eight (rarely seven) upper labials; vertebral stripe, if present, one scale wide.

A light vertebral stripe ..... D. *eques*.

No vertebral stripe; no cross bands ..... E. *sumichrasti*.

No stripe, but cross bands ..... F. *phenax*.

B. Scales in 21 rows; eight upper labials, fourth and fifth entering the eye; dorsal stripe, if present, narrow.

A narrow yellow dorsal stripe; belly greyish

olive or black ..... G. *couchii*.

- No vertebral stripe ..... H. *hammondii*.  
 A narrow yellow dorsal stripe; belly yellowish  
 white ..... I. *marcianus*.  
 II. Lateral stripe running along the third, or third and fourth  
 rows of scales; scales in 21 rows.  
 Usually seven upper labials ..... K. *radix*.  
 Eight upper labials ..... L. *macrostemma*.  
 III. Lateral stripe running along the second, third, and fourth  
 rows of scales; scales in 19 rows..... M. *butleri*.

A. *Forma typica*.

- Coluber ordinatus*, Linn. *S. N.* i. p. 379 (1766); *Catesby, Nat. Hist. Carolina*, ii. pl. liii. (1771); *Harl. Med. Phys. Res.* p. 113 (1835).  
 — *ibibe*, Latr. *Rept.* iv. p. 70 (1802); *Daud. Rept.* vii. p. 181 (1803).  
 — *bipunctatus*, Latr. *t. c.* p. 85.  
*Tropidonotus ordinatus*, Boie, *Isis*, 1827, p. 535; *Holbr. N. Am. Rept.* iv. p. 45, pl. xii. (1842).  
 — *bipunctatus*, part., *Schleg. Phys. Serp.* ii. p. 320 (1837); *Dum. & Bibr.* vii. p. 582 (1854).  
*Eutania ordinata*, *Baird & Gir. Cat. N. Am. Rept.* p. 32 (1853)  
 ? *Tropidonotus jauresi*, *Dum. & Bibr. t. c.* p. 606.  
*Tropidonotus ordinatus*, part., *Günth. Cat.* p. 73 (1858).  
*Eutania sirtalis*, subsp. *ordinata*, Cope, *Wheeler's Rep. U.S. Surv. W. 100th Mer.* v. p. 546 (1875).  
 — *sirtalis graminea*, Cope, *Proc. U.S. Nat. Mus.* xi. 1889, p. 399

Seven upper labials, third and fourth entering the eye. Scales in 19 rows, outer row keeled. Ventrals 137-152; subcaudals 54-79. Olive or green above, uniform or with black spots disposed quincuncially; stripes absent or very indistinct; greenish white inferiorly, with a more or less distinct black spot at the outer end of the ventrals.

United States east of the Mississippi.

- a. ♀ (V. 137; C. ?). Georgia. Smithsonian Instit. [P].  
 b-f, g. ♂ (V. 150; C. 68) & N. America.  
 ♀ (V. 147, 142, 142, 142,  
 141; C. 63, 54, 53, 54, 71).

B. *Var. sirtalis*.

- Coluber sirtalis*, Linn. *S. N.* i. p. 383 (1766); *Catesby, Nat. Hist. Carol.* ii. pl. li. (1771); *Daud. Rept.* vii. p. 146 (1803); *Harl. Med. Phys. Res.* p. 116 (1835); *Storer, Rep. Fish. & Rept. Mass.* p. 221 (1839).  
 — *parietalis*, Say, *Long's Exped. Rocky M.* i. p. 186 (1823); *Harl. l. c.*  
*Tropidonotus parietalis*, Boie, *Isis*, 1827, p. 535; *Hallow. Sitgreave's Exped. Zuni & Color. R.* p. 139, pl. xvii. (1853).  
 — *bipunctatus*, part., *Schleg. Phys. Serp.* ii. p. 320 (1837); *Dum. & Bibr.* vii. p. 582 (1854).  
 — *sirtalis*, *Holbr. N. Am. Herp.* iv. p. 41, pl. xi. (1842); *Wied, N. Acta Ac. Leop. Carol.* xxxii. i. 1865, p. 87; *Garm. N. Am. Rept.* p. 25, pl. iii. fig. 3 (1883).

- Tropidonotus tænia*, *Dekay, N. Y. Faun., Rept.* p. 43, pl. xiii. fig. 27 (1842).  
*Eutainia sirtalis*, *Baird & Gir. Cat. N. Am. Rept.* p. 30 (1853);  
*H. Garm. Bull. Illin. Lab.* iii. 1892, p. 266.  
 — *parietalis*, *Baird & Gir. l. c.* p. 28.  
 — *dorsalis*, *Baird & Gir. l. c.* p. 31.  
*Tropidonotus ordinatus*, part., *Günth. Cat.* p. 73 (1858).  
*Eutainia ornata*, *Baird, U.S. Mex. Bound. Surv. ii., Rept.* p. 16,  
 pl. ix. (1859); *Cope, Proc. Ac. Philad.* 1866, p. 305; *Coues,*  
*Wheeler's Rep. U.S. Surv. W. 100th Mer.* v. p. 613 (1875).  
*Tropidonotus sirtalis*, var. *dorsalis*, *Jan, Icon. Gén.* 25, pl. iv. fig. 1  
 (1867).  
*Eutrenia sirtalis*, subspp. *sirtalis*, *dorsalis*, *obscura*, *parietalis*, *Cope,*  
*Wheeler's Rep. U.S. Surv. W. 100th Mer.* v. p. 546 (1875).  
 — *sirtalis parietalis*, *Coues & Yarrow, Bull. U.S. Geol. Surv.* iv.  
 1878, p. 276.  
 — *sirtalis semifasciata*, *Cope, Proc. U.S. Nat. Mus.* xiv. 1892,  
 p. 662.  
*Thamnophis sirtalis*, *Garm. Bull. Essex Inst.* xxiv. 1892, p. 104.

Seven upper labials, third and fourth entering the eye. Scales in 19 rows, all strongly keeled. Ventrals 138–170; subcaudals 64–86. Brownish olive with black spots, or black above with three yellow, red, or pale green stripes; greenish white inferiorly, with a black spot at the outer end of the ventrals.

North America east of the Rocky Mountains; North Mexico.

- a-d.* ♀ (V. 161; C. 72), Lake Winnipeg. Sir J. Richardson [P.]  
 hgr. (V. 159; C. 67), &  
 † yg. (V. 160, 154; C. 77, ?).  
*e.* ♀ (V. 145; C. ?). New York. J. Murray, Esq. [P.]  
*f.* ♀ (V. 143; C. 62). Bay View, Michi- Prof. C. Eigenmann [C.]  
 gan.  
*g.* Yg. (V. 170; C. 81). Island Lake, Lyon Prof. G. B. Howes [P.]  
 Co., Minnesota.  
*h-k.* ♂ (V. 151, 147; C. Bloomington, In- C. Bollman, Esq. [C.]  
 76, 69) & yg. (V. 140;  
 C. 72).  
*l, m, n.* ♂ (V. 170, 155; Missouri. Smithsonian Instit. [P.]  
 C. 85, 69) & ♀ (V. 151;  
 C. 76).  
*o.* Yg. (V. 168; C. ?). Utah. Smithsonian Instit. [P.]  
*p.* Skull. New Orleans.  
*q.* Skull. Mexico.

### C. Var. *infernalis*.

- Coluber infernalis*, *Blainv. Nouv. Ann. Mus.* iv. 1835, p. 59, pl. xxvi.  
 fig. 3.  
*Tropidonotus concinnus*, *Hallow. Proc. Ac. Philad.* 1852, p. 182.  
*Eutainia infernalis*, *Baird & Gir. Cat. N. Am. Rept.* p. 26 (1853);  
*Girard, U.S. Explor. Exped., Herp.* p. 148, pl. xiv. fig. 2 (1858);  
*Bocourt, Bull. Soc. Zool. Fr.* 1892, p. 40; *Cope, Proc. U.S. Nat.*  
*Mus.* xiv. 1892, p. 657.  
 — *pickeringii*, *Baird & Gir. l. c.* p. 27; *Girard, l. c.* p. 150,  
 pl. xiii. fig. 14.  
 — *ordinoides*, *Baird & Gir. l. c.* p. 33; *Girard, l. c.* p. 153,  
 pl. xiv. fig. 1.



- Eutainia elegans*, Baird & Gir. l. c. p. 34; Cope, *Wheeler's Rep. U.S. Surv. W. 100th Mer.* v. p. 545 (1875).  
 — *concinna*, Baird & Gir. l. c. p. 146; Cooper, *Rep. U.S. Explor. Surv. R. R.* xii. pt. ii. p. 298, pl. xv. fig. 2 (1859).  
*Tropidonotus trivittatus*, Hallow. *Proc. Ac. Philad.* 1853, p. 237.  
 — *ordinatus*, part., Günth. *Cat.* p. 73 (1858).  
 — *elegans*, Jan, *Arch. Zool. Anat. Phys.* iii. 1865, p. 214.  
 ? *Tropidonotus kennicottii*, Jan, l. c. p. 216.  
*Eutænia sirtalis*, subsp. *pickeringii et tetratænia*, Cope, *Wheeler's Rep.* p. 546.  
*Tropidonotus sirtalis*, var. *infernalis*, Garman, *N. Am. Rept.* p. 24 (1883).  
*Eutænia elegans*, part., Cope, *Proc. U.S. Nat. Mus.* xiv. 1892, p. 651.  
 — *infernalis vidua*, Cope, l. c. p. 658.  
 — *sirtalis tetratænia*, Cope, l. c. p. 664.  
 — *sirtalis trilineata*, Cope, l. c. p. 665.  
 ? *Eutænia aurata*, Cope, l. c. p. 659.

Seven or eight upper labials. Scales in 19 rows (21 in specimens *s* and *y*), outer row smooth or feebly keeled. Ventrals 144–170; subcaudals 44–86. Olive, spotted with black, or black above, with a yellow or bluish vertebral stripe and usually a pair of lateral ones which may be tinged with vermilion; blue, grey, olive, or black inferiorly, sometimes with scattered vermilion spots.

Western North America.

- |   |                                     |                              |
|---|-------------------------------------|------------------------------|
| <i>a-i.</i> ♂ (V. 170; C. 80),<br>♀ (V. 158, 158, 162,<br>161, 165; C. ?, 72, 80,<br>73, 77), hgr. (V. 165,<br>162; C. 77, 79), & yg.<br>(V. 159; C. 78). | Sumass Prairies, Brit. Columbia.    | Boundary Commission.         |
| <i>k.</i> ♀ (V. 163; C. ?).   | Columbia R.                         | K. Loftus, Esq. [P.].        |
| <i>l-n.</i> ♂ (V. 153; C. 79), ♀<br>(V. 156; C. 69), & yg.<br>(V. 154; C. 70).  | Vancouver Id.                       | Col. Hawkins [C.].           |
| <i>o.</i> ♀ (V. 162; C. 71).  | N. Orca Id., Gulf of Georgia.       | Lords of the Admiralty [P.]. |
| <i>p.</i> ♂ (V. 157; C. 71).  | Revelstoke, Brit. Columbia.         | Prof. C. Eigenmann [C.].     |
| <i>q.</i> ♀ (V. 160; C. 69).  | Golden, Alberta.                    | Prof. C. Eigenmann [C.].     |
| <i>r.</i> ♂ (V. 162; C. 79).  | Washington Territory.               | J. O. W. Fabert, Esq. [P.].  |
| <i>s-t.</i> ♀ (V. 155, 153; C. 72, 71).   | Camp Taylor, Marin Co., California. | Prof. C. Eigenmann [C.].     |
| <i>u.</i> Hgr. (V. 157; C. 68).   | Santa Cruz, California.             | Mr. A. Forrer [C.].          |
| <i>v-w.</i> ♀ (V. 168; C. 85)<br>& hgr. (V. 157; C. 79).  | Monterey, California.               | J. H. Gurney, Esq. [P.].     |
| <i>x.</i> Yg. (V. 144; C. 76).  | Monterey, California.               |                              |
| <i>y.</i> Hgr. (V. 156; C. 65).   | California.                         | Lord Walsingham [P.].        |
| <i>z-y.</i> ♂ (V. 165; C. 86)<br>& ♀ (V. 156, 157, 161;<br>C. ?, 73, 71).   | California.                         |                              |



D. Var. *eques*.

- Coluber eques*, Reuss, *Mus. Senckenb.* i. 1834, p. 152, pl. viii. fig. 2.  
*Eutænia cyrtopsis*, Kennicott, *Proc. Ac. Philad.* 1860, p. 333; Cope, *Proc. Ac. Philad.* 1866, p. 306, and *Wheeler's Rep. U.S. Surv. W. 100th Mer. v. p. 546* (1875), and *Bull. U.S. Nat. Mus.* no. 17, p. 23 (1880), and *Proc. U.S. Nat. Mus.* xiv. 1892, p. 656.  
*Thamnophis cyrtopsis*, var. *cyclides*, Cope, *Proc. Ac. Philad.* 1861, p. 299.  
*Tropidonotus collaris*, Jan, *Arch. Zool. Anat. Phys.* iii. 1865, p. 209, and *Icon. Gén.* 25, pl. v. fig. 2 (1867).  
*Eutænia cyrtopsis ocellata*, Cope, *Bull. U.S. Nat. Mus.* no. 17, p. 22 (1880).  
*Tropidonotus sirtalis*, var. *collaris*, Garm. *N. Am. Rept.* p. 25 (1883).  
*Eutænia collaris*, Cope, *Proc. Am. Philos. Soc.* xxii. 1884, p. 173; Dugès, *La Naturelleza*, (2) i. 1888, p. 127, pl. xiii. fig. 16.  
 — *pulcherrilatus*, Cope, *l. c.* p. 174; Dugès, *l. c.* p. 128.

Eight (rarely seven) upper labials. Scales in 19 rows, outer row, more or less distinctly keeled. Ventrals 137–175; subcaudals 58–100. Olive-brown above, with black spots disposed quincuncially; a yellow or orange vertebral line, one scale wide, and a yellow or whitish lateral band; a black nuchal collar; upper labials yellowish with black sutures; lower parts greenish white.

Lower California, Arizona, Western Texas, Mexico, Guatemala.

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|---|--|---|
| <i>a-i.</i> ♂ (V. 156, 159, 156; C. 100, 82, 82), ♀ (V. 148, 151; C. 73, ?), & hgr. (V. 160, 161, 148, 153; C. 87, 86, 88, 84). | Ciudad, Durango.                       | Mr. A. Forrer [C.].                               |
| <i>k.</i> Ad. (head and anterior part of body only).  | La Venta, Guadaluajara, 5132 ft.       | Dr. A. C. Buller [C.].                            |
| <i>l.</i> Yg. (V. 162; C. 91).  | Mezquital del Oro, Zacatecas, 4500 ft. | Dr. A. C. Buller [C.].                            |
| <i>m.</i> Yg. (V. 155; C. ?).   | Zacatecas.                             | J. M. Cameron, Esq. [P.].                         |
| <i>n-o.</i> ♂ (V. 153; C. 77) & ♀ (V. 175; C. 67).  | Jalisco, N. of Rio de Santiago.        | F. D. Godman, Esq. [P.].                          |
| <i>p.</i> ♂ (V. 156; C. 88).  | Chilpanzingo, Guerrero.                | Mr. H. H. Smith [C.].<br>F. D. Godman, Esq. [P.]. |
| <i>q.</i> ♀ (V. 151; C. 83).  | Xucumanatlan, Guerrero.                | Mr. H. H. Smith [C.].<br>F. D. Godman, Esq. [P.]. |
| <i>r-t.</i> ♂ (V. 155; C. 84) & ♀ (V. 148, 147; C. 73, 69).   | Amula, Guerrero, 8000 ft.              | Mr. H. H. Smith [C.].<br>F. D. Godman, Esq. [P.]. |
| <i>u.</i> Yg. (V. 154; C. 92).  | Jalapa.                                | Mr. Hoegs [C.].                                   |
| <i>v.</i> ♀ (V. 151; C. 79).  | Rio Chisoy.                            | O. Salvin, Esq. [C.].                             |
| <i>w.</i> ♀ (V. 143; C. 62).  | Dueñas, Guatemala.                     | O. Salvin, Esq. [C.].                             |
| <i>x.</i> ♀ (V. 137; C. 91).  | Guatemala.                             | O. Salvin, Esq. [C.].                             |

E. Var. *sumichrasti*.

- Eutænia sumichrasti*, Cope, *Proc. Ac. Philad.* 1866, p. 306, and *Proc. Am. Philos. Soc.* xxii. 1884, p. 174.

Eight upper labials. Scales in 19 rows, outer row feebly keeled. Ventrals 147-148; subcaudals 60-65. Olive-brown, without stripes except traces on the neck; upper lip and lower parts dirty yellow. May be regarded as a *T. eques* without the stripes.

Southern Mexico, Guatemala.

a. ♀ (V. 147; C. 60). Dueñas, Guatemala. O. Salvin, Esq. [C.].

#### F. Var. *phenax*.

*Eutania phenax*, Cope, *Proc. Ac. Philad.* 1868, p. 134.

Agrees in structure with the two preceding forms, but differs in the total absence of stripes and the presence of reddish black-edged cross bars.

Southern Mexico.

a. ♂ (V. 155; C. 75). Orizaba.

#### G. Var. *couchii*.

*Eutania couchii*, Kennicott, *Rep. U.S. Explor. Surv. R. R.* x. pt. 4, p. 10 (1857).

*Eutania henshawi*, Yarrow, *Proc. U.S. Nat. Mus.* vi. 1883, p. 152.

Eight upper labials. Scales in 21 rows, outer row faintly keeled. Blue-black above, without spots; a narrow yellow dorsal line; belly greyish olive or black.

Washington Territory, California.

#### H. Var. *hammondii*.

*Eutania hammondii*, Kennicott, *Proc. Ac. Philad.* 1860, p. 332; Cope, *Wheeler's Rep. U.S. Surv. W. 100th Mer.* v. p. 545 (1875).

? *Eutania angustirostris*, Kennicott, *l. c.*

*Tropidonotus hammondii*, Jan, *Arch. Zool. Anat. Phys.* iii. 1865, p. 215.

Eight upper labials, fourth and fifth entering the eye. Scales in 21 rows, outer row smooth or feebly keeled. Ventrals 159-171; subcaudals 79-85. Dark olive-brown above, young olive with black spots; vertebral stripe absent, or merely indicated on the nape; a rather indistinct lateral stripe; lower parts pale olive, sometimes with a dark line along the middle posteriorly.

California.

a. ♂ (V. 170; C. ?). Los Angeles, A. Erwin Brown, Esq.  
California. [P.].

b. Yg. (V. 159; C. 79). California. Lord Walsingham [P.].

c. Yg. (V. 171; C. 85). California.

#### I. Var. *marcianus*.

*Eutania marciana*, Baird & Gir. *Cat. N. Am. Rept.* p. 36 (1853), and in *Marcy's Explor. Red Riv.* p. 221, pl. iii. (1853); Cope, *Wheeler's Rep. U.S. Surv. W. 100th Mer.* v. p. 545 (1875).

? *Tropidonotus intermedius*, Jan, *Arch. Zool. Anat. Phys.* iii. 1865, p. 209.

*Tropidonotus marcianus*, *Jan. l. c.* p. 215.

— *sirtalis*, var. *marciana*, *Garm. N. Am. Rept.* p. 138 (1883).

? *Eutania nigrolateris*, *A. E. Brown, Proc. Ac. Philad.* 1889, p. 421.

Eight upper labials, fourth and fifth entering the eye. Scales in 21 rows, outer row smooth or faintly keeled. Ventrals 144–163; subcaudals 53–85. Pale brown above, with black spots disposed quincuncially; a narrow yellow vertebral line and a more or less indistinct light lateral streak; upper labials, except the two last, pre- and postoculars yellowish, with black streaks on the labial sutures below and behind the eye; a black nuchal collar; lower parts yellowish white.

Texas, New Mexico, Arizona, Colorado.

- a. ♂ (V. 158; C. 79). Texas. Smithsonian Inst. [P.]  
(As *E. marciana*.)  
b. ♀ (V. 144; C. 69). Texas.  
c. ♀ (V. 154; C. 67). Duval Co., Texas. W. Taylor, Esq. [C.]  
d. Yg. (V. 163; C. 76). El Paso, Texas. Mr. A. Forrer [C.]  
e. ♀ (V. 153; C. ?). Tucson, Arizona. A. Erwin Brown, Esq. [P.]

#### K. Var. *radix*.

*Eutania radix*, *Baird & Gir. Cat. N. Am. Rept.* p. 34 (1853); *Kennicott, Rep. U.S. Explor. Surv. R. R.* xii. pt. ii. p. 299 (1860); *Coues & Yarrow, Bull. U.S. Geol. Surv.* iv. 1878, p. 277; *Cope, Proc. U.S. Nat. Mus.* xiv. 1892, p. 650; *H. Garm. Bull. Illin. Lab.* iii. 1892, p. 266.

— *haydenii*, *Kennicott, l. c.* p. 298, pl. xiv.

*Tropidonotus sirtalis*, var. *radix* & *haydenii*, *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 212.

? *Tropidonotus glaphyros*, *Jan, l. c.* p. 214.

*Eutania radix twiningi*, *Coues & Yarrow, l. c.* p. 279.

— *radix melanotenia*, *Cope, Proc. U.S. Nat. Mus.* xi. 1889, p. 400.

Seven (rarely eight) upper labials, third and fourth entering the eye. Scales in 21 rows, outer row distinctly keeled. Ventrals 145–173; subcaudals 51–75. Olive above, with black spots arranged quincuncially, or blackish; a yellow or orange black-edged vertebral stripe, and a light lateral streak on the third and fourth rows of scales; belly greenish white, with a black spot at the outer end of each ventral.

North America, north of 37°, from the Rocky Mountains to Manitoba and Indiana.

- a. ♀ (V. 158; C. 68). Platte River. Smithsonian Inst. [P.]  
(As *E. haydenii*.)  
b. ♀ (V. 161; C. 73). Island Lake, Lyon Prof. G. B. Howes  
Co., Minnesota. [P.]  
c. ♀ (V. 145; C. ?). Illinois. Smithsonian Inst. [P.]  
(As *E. radix*.)  
d. ♀ (V. 163; C. 71). Kansas.  
e-g. ♂ (V. 166; C. ?) & Canada. G. M. Dawson, Esq.  
♀ (V. 164, 171; C. 71, ?). [C.], Boundary Com-  
mission.  
h, i. ♂ (V. 167, 173; C. ?, Moose Jaw, Assi- Prof. C. Eigenmann  
75). niboia, W. Canada. [C.]

L. Var. *macrostemma*.

*Eutainia macrostemma*, Kennicott, *Proc. Ac. Philad.* 1860, p. 331; Cope, *Proc. Ac. Philad.* 1866, p. 307, and *Wheeler's Rep. U.S. Surv. W. 100th Mer.* v. p. 545 (1875); Coues, *Wheeler's Rep. t. c.* p. 615; Cope, *Proc. U.S. Nat. Mus.* xiv. 1892, p. 651.

— *megalops*, Kennicott, *l. c.* p. 330.

? *Eutænia flavilabris*, Cope, *Proc. Ac. Philad.* 1866, p. 306.

*Eutænia macrostemma*, var. *megalops*, Cope, *Wheeler's Rep.* p. 545.

— *insigniarum*, Cope, *Proc. Am. Philos. Soc.* xxii. 1884, p. 172;

Dugès, *La Natureza*, (2) i. 1888, p. 129; Ives, *Proc. Ac. Philad.* 1891, p. 462.

Eight upper labials, fourth and fifth entering the eye. Scales in 21 rows, outer row more or less distinctly keeled. Ventrals 156-174; subcaudals 64-82. Olive or brown above, with black spots or striated with black; a yellow median stripe (sometimes obsolete), and another on each side on the third, or third and fourth rows of scales; ventrals and subcaudals greenish or bluish, more or less distinctly edged with blackish.

Mexico, Arizona, New Mexico, Colorado, and Wyoming.

*a-f.* ♂ (V. 170, 174, 166, 170; Ciudad, Durango. Mr. A. Forrer [C.].  
C. 78, 81, 80, 78) & ♀  
(V. 160, 159; C. 63, 66).

*g.* Yg. (V. 156; C. 75). City of Mexico. P. Geddes. Esq. [P.].

*h.* Yg. (V. 162; C. 80). Hacienda del Cas- Dr. A. C. Buller  
tillo, Guadala- [C.].  
jara, Jalisco.

*i-n.* ♂ (V. 165; C. 70), ♀ Oaxaca. Mr. Hoega [C.].

(V. 159, 157; C. 68, 70), &

yg. (V. 160, 162; C. ?, 82).

*o-p.* ♀ (V. 157; C. 64) & yg. Mexico.

(V. 157; C. 67).

M. Var. *butleri*.

*Eutænia butleri*, Cope, *Proc. U.S. Nat. Mus.* xi. 1889, p. 399.

Seven upper labials. Scales in 19 rows, outer keeled. Ventrals 144; subcaudals 62. Olive-brown above, with three yellowish stripes; the median covering one and two half rows of scales, and the lateral running along the second, third, and fourth rows; these stripes black-bordered; lower parts olive.

Indiana.

7. *Tropidonotus saurita*.

*Coluber saurita*, Linn. *S. N. i.* p. 385 (1766); *Catesby, Nat. Hist. Carol.* ii. pl. 1. (1771); *Daud. Rept.* vii. p. 104 (1803); *Harl. Med. Phys. Res.* p. 115 (1835); *Storer, Rep. Fish. & Rept. Mass.* p. 229 (1889).

— *proximus*, Say, in *Long's Exped. Rocky M.* i. p. 187 (1823); *Harl. l. c.* p. 116.

*Tropidonotus saurita*, Boie, *Isis*, 1827, p. 535; *Schleg. Phys. Serp.* ii. p. 321 (1837); *Dum. & Bibr.* vii. p. 585 (1854); *Günth. Cat.* p. 72 (1858); *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 212, and *Icon.*



- Gen.* 26, pl. ii. fig. 1 (1868); *Garm. N. Am. Rept.* p. 23, pl. iii. fig. 2 (1883).
- Tropidonotus proximus*, *Boie, l. c.*; *Hallow. in Sitgreave's Exped. Zuni & Color. R.* p. 134, pl. xviii. (1853).
- Leptophis sauritus*, *Holbr. N. Am. Herp.* iv. p. 21, pl. iv. (1842); *Dekay, N. Y. Faun., Rept.* p. 47, pl. xi. fig. 1 (1842).
- Eutainia saurita*, *Baird & Gir. Cat. N. Am. Rept.* p. 24 (1853); *Cope, Wheeler's Rep. Explor. Surv. W. 100th Mer.* v. p. 545 (1875); *H. Garm. Bull. Illin. Lab.* iii. 1892, p. 264.
- *fuinyi*, *Baird & Gir. l. c.* p. 25; *Cooper, Rep. U.S. Explor. Surv. R. R.* xii. pt. ii. p. 299, pls. xiii. & xvi. (1860); *Cope, l. c.*, and *Bull. U.S. Nat. Mus.* no. 17, p. 23 (1880).
- *proxima*, *Baird & Gir. l. c.*, and in *Marcy's Explor. Red Riv.* p. 220, pl. ii. (1853); *Wied, N. Acta Ac. Leop. Cuvol.* xxxii. i. 1865, p. 90; *Cope, Wheeler's Rep.* v. p. 545, and *Bull. U.S. Nat. Mus.* no. 17, p. 23, and *Proc. U.S. Nat. Mus.* xiv. 1892, p. 650.
- *sackenii*, *Kennicott, Proc. Ac. Philad.* 1859, p. 98; *Cope, Wheeler's Rep.* v. p. 545, and *Proc. U.S. Nat. Mus.* xi. 1889, p. 393.
- Eutainia rutiloris*, *Cope, Proc. Am. Philos. Soc.* xxii. 1885, p. 388.
- Thamnophis proxima*, *Garm. Bull. Essex Inst.* xxiv. 1892, p. 105.

Form slender. Eye rather large. Rostral broader than deep, visible from above; internasals as long as broad, as long as or a little shorter than the præfrontals; frontal once and a half to once and two thirds as long as broad, as long as its distance from the end of the snout, as long as or a little shorter than the parietals; loreal about as long as deep; one præ- and three (rarely four) postoculars; temporals 1 + 2 or 1 + 3; eight (rarely seven) upper labials, fourth and fifth (or third and fourth) entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows, all strongly keeled. Ventrals 144-178; anal entire; subcaudals 86-127. Dark olive or dark brown above, with three more or less distinct yellow, pale green, or orange stripes, the laterals on the third and fourth series of scales; usually a pair of light dots close together on the suture between the parietal shields; upper lip and lower parts greenish white.

Total length 730 millim.; tail 230.

North America east of the Rocky Mountains; Mexico.

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|---|-----------------------|--|
| <i>a-b.</i> ♂ (V. 167; C. 109)<br>& ♀ (V. 157; C. 127).                                   | Bloomington, Indiana. | C. Bollman, Esq. [C.].                               |
| <i>c-d.</i> ♀ (V. 165, 171; C. 94, ?).  | Kansas.               |  |
| <i>e.</i> ♂ (V. 158; C. ?).   | Lake Kerr, Florida.   | A. Erwin Brown, Esq. [P.].                           |
| <i>f-i.</i> ♂ (V. 170, 173; C. ?,<br>112), ♀ (V. 175; C. 107),<br>& yg. (V. 173; C. 111). | New Orleans.          | M. Saülé [C.].                                       |
| <i>k.</i> ♂ (V. 171; C. 114).   | Louisiana.            | Smithsonian Inst. [P.].<br>(As <i>E. fairayi</i> .)  |
| <i>l.</i> Yg. (V. 169; C. 96).  | Duval Co., Texas.     | W. Taylor, Esq. [P.].                                |
| <i>m, n.</i> ♀ (V. 160, 167; C. 105, ?).  | Texas.                |  |
| <i>o.</i> ♂ (V. 171; C. 108).   | Matamoras, Mexico.    | Smithsonian Inst. [P.].                              |
| <i>p.</i> ♀ (V. 149; C. ?).   | Atoyac R., Guerrero.  | Mr. H. H. Smith<br>[C.]. F. D. Godman,<br>Esq. [P.]. |



<i>q.</i> ♀ (V. 156; C. †).	Jalapa.	F. D. Godman, Esq. [P.].
<i>r.</i> ♂ (V. 157; C. 97).	Jalapa.	
<i>s.</i> Hgr. (V. 157; C. 100).	Jalapa.	Mr. Hoeger [C.].
<i>t-u.</i> ♂ (V. 152; C. 98) & ♀ (V. 151; C. †).	Cozumel Id., Yuc- atan.	Mr. Gaumer [C.].
<i>v-w.</i> ♀ (V. 145; C. †) & yg. (V. 144; C. 87).	Belize.	J. Smith, Esq. [P.].
<i>x.</i> ♀ (V. 147; C. 93).	Honduras.	

### 8. *Tropidonotus multimaculatus*.

*Atomarchus multimaculatus*, Cope, *Am. Nat.* 1883, p. 1300.

*Eutænia multimaculata*, Cope, *Proc. Am. Philos. Soc.* xxiii. 1886, p. 284.

Snout long and compressed. Rostral broader than deep; internasals longer than broad; frontal narrow, with concave sides, the anterior angles touching the superior præoculars; loreal longer than deep; two or three præ- and three postoculars; temporals 1 + 3; upper labials eight, low and rather long, fourth entering the eye. Scales in 21 rows, all keeled except the outer row. Anal entire. Ashy grey or brown above, uniform or with six or seven longitudinal series of dark brown or rusty spots, or dark brown ocelli with rusty orange centres; the spots of the median two or three rows sometimes united, forming short cross bars; yellowish inferiorly, the shields with dark edges.

Total length 708 millim.; tail 171.

New Mexico and Chihuahua, North Mexico.

### 9. *Tropidonotus rufopunctatus*.

*Chilopoma rufopunctatum*, Cope, *Wheeler's Rep. U.S. Explor. Surv.* W. 100th Mer. v. p. 544, pl. xx. fig. 1 (1875).

*Tropidonotus rufopunctatus*, *Gerdm. N. Am. Rept.* p. 23 (1883).

*Eutænia rufopunctata*, Cope, *Proc. U.S. Nat. Mus.* xiv. 1892, p. 666.

Eye large. Rostral large, obtuse, with prominent lateral and posterior borders; nasal single, long and rather narrow; loreal elongate; one præ- and three postoculars; temporals 1 + 3; frontal large, with concave sides, in contact with the præocular; eight upper labials, fourth and fifth entering the eye. Scales in 21 rows, all except the first and second on each side strongly keeled. Ventrals 177; anal entire; subcaudals 87. Light brown above, the anterior half of the body with six rows of small, alternating bright rufous or orange spots; lower surfaces pale brownish grey.

Total length 257 millim.; tail 62.

Southern Arizona.

### 10. *Tropidonotus pealii*.

*Tropidonotus pealii*, *W. L. Slater, Journ. As. Soc. Beng.* lx. 1891, p. 241, pl. vi. fig. 4.

Eye moderate. Rostral just visible from above; internasals

broadly truncated anteriorly, shorter than the præfrontals; frontal longer than its distance from the end of the snout, shorter than the parietals; loreal nearly square; one or two præ- and two or three postoculars; temporals 2+2; nine upper labials, fourth and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows, strongly keeled, outer row also keeled but not so strongly as the rest. Ventrals 142-144; anal entire; subcaudals 75-77. Dark brown above, with a narrow light longitudinal line on each side, and a broader stripe, two scales wide, below it; head dark brown above, the upper and lower labials and rostral yellow, edged and blotched with brown; ventrals very dark brown, each tipped laterally with light yellow; an indistinct yellow line along the middle of the ventral shields, rather more conspicuous posteriorly.

Total length 500 millim.; tail 125.

Sibsagar, Assam.

### 11. *Tropidonotus picturatus*.

*Tropidonotus picturatus*, Schleg. *Phys. Serp.* ii. p. 314, pl. xii. figs. 8 & 9 (1837); Dum. & Bibr. vii. p. 602 (1854); Günth. *Cat.* p. 71 (1858); Jan. *Arch. Zool. Anat. Phys.* iii. 1865, p. 228, and *Icon. Gén.* 27, pls. iii. figs. 3 & 4, and iv. (1868); Krefft, *Snakes of Austral.* p. 20, pl. v. fig. 8 (1869); Doria, *Ann. Mus. Genova*, vi. 1874, p. 348; Peters & Doria, *Ann. Mus. Genova*, xiii. 1878, p. 388.

— *australis*, Gray, *Zool. Misc.* p. 54 (1842).

— *semicinctus*, Dum. & Bibr. t. c. p. 603.

*Katophis plumbea*, Macleay, *Proc. Linn. Soc. N. S. W.* ii. 1877, p. 36.

? *Tropidonotus angusticeps*, Macleay, *Proc. Linn. Soc. N. S. W.* viii. 1883, p. 433.

*Tropidonotus ater*, Macleay, *op. cit.* x. 1885, p. 67.

Eye moderate. Rostral broader than deep, just visible from above; internasals as long as broad or longer, broadly truncate in front, as long as or a little shorter than the præfrontals; frontal once and a half to once and three fourths as long as broad, longer than its distance from the end of the snout, a little shorter than the parietals; loreal as long as deep or deeper; one or two præ- and three (rarely two) postoculars; temporals 1+1 or 1+2 (rarely 2+2); eight upper labials, third, fourth, and fifth (rarely third and fourth or fourth and fifth) entering the eye; four or five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 15 (rarely 17) rows, strongly keeled, of outer row smooth or more or less distinctly keeled. Ventrals 128-165; anal divided; subcaudals 52-82. Coloration very variable.

Total length 740 millim.; tail 180.

Moluccas, Papuasias, North Australia.

A. Blackish brown above, anteriorly with yellowish transverse bands; ventrals broadly bordered and spotted with black.

- a. ♂ (V. 165; C. ?). Ceram. Dr. Bleeker.  
 b. ♀, bleached (V. 162; C. 72). Ceram. Dr. Bleeker.  
 (*Coryphodon carinatus*, Blkr.)

B. Dark olive-brown above, with small black spots; ventrals mostly edged with black.

- c. ♀ (V. 142; C. 58). Cape York.  
 d. ♂ (V. 154; C. 72). Rockhampton.  
 e-g, h. ♂ (V. 149, 151, 150, Port Essington. (Types of *T. australis*).  
 153; C. 68, 72, ?, 67).  
 i. ♀ (V. 146; C. ?). N.W. Australia.

C. Uniform reddish- or olive-brown above; ventrals usually uniform yellowish.

- k-o. ♂ (V. 150; C. ?), ♀ Fly River. Rev. S. Macfarlane  
 (V. 149; C. ?), & yg. (V. 150, [C.].  
 153, 147; C. 74, 82, 80).  
 p. ♂ (V. 144; C. ?). New Guinea, S. of Dr. Comrie [C.].  
 Huon Gulf.  
 q. ♀ (V. 142; C. 71). St. Aignan, Louis- B. H. Thomson,  
 iade Archipelago. Esq. [P.].  
 r. ♀ (V. 147; C. 66). N.W. Australia. Sir J. Richardson  
 [P.].  
 s. Yg. (V. 153; C. 69). N. Australia. Dr. J. R. Elsey  
 [P.].

## 12. *Tropidonotus truncatus*.

*Styporhynchus truncatus*, Peters, *Mon. Berl. Ac.* 1863, p. 399, and 1869, p. 445, pl. —. fig. 5.

Apparently allied to *T. picturatus*, but snout more prominent and truncate, and scales feebly keeled, smooth on the nape. Two præ- and two postoculars. Scales in 15 rows. Ventrals 142-147; subcaudals 43. Brown or blackish above; head rusty brown above, with a white black-edged streak from below the eye to the side of the neck; some of the dorsal scales with a light edge or spot; lower surface blackish dotted with whitish, or brownish white dotted with black.

Total length 425 millim.; tail 75.

Gilolo, Ternate.

## 13. *Tropidonotus celebicus*.

*Styporhynchus celebicus*, Peters & Doria, *Ann. Mus. Genova*, xiii. 1878, p. 386.

Distinguished from the preceding by the less prominent snout, the rostral being not so deep and more vertical, and the presence of three postoculars. Ventrals 140; subcaudals 48. Brown above, with two irregular ochraceous stripes; lips and chin powdered with

blackish; a black collar, edged with yellow; belly and lower surface of tail yellow, dotted with black.

Total length 360 millim.; tail 75.

S.E. Celebes.

#### 14. *Tropidonotus fuliginoides*.

*Coronella fuliginoides*, *Günth. Cat.* p. 39 (1858); *Mocquard, Bull. Soc. Philom.* (8) i. 1889, p. 145.

*Meizodon longicauda*, *Günth. Ann. & Mag. N. H.* (3) xii. 1863, p. 352, pl. v. fig. A; *Bocage, Journ. Sc. Lisb.* x. 1887, p. 184.

*Coronella olivacea*, part., *Peters, Reise n. Mossamb.* iii. p. 114 (1882).  
— *longicauda*, *Mocquard, Bull. Soc. Philom.* (7) xi. 1887, p. 69.

Eye moderate. Rostral broader than deep, just visible from above; internasals as long as broad or a little broader, a little shorter than the præfrontals; frontal once and two thirds to twice as long as broad, longer than its distance from the end of the snout, shorter than the parietals; loreal as long as deep or a little deeper than long; one (rarely two) præ- and three postoculars; temporals 1 + 2; eight upper labials, fourth and fifth entering the eye; four lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales smooth, in 17 rows. Ventrals 119-135; anal usually entire; subcaudals 75-95. Brown above, which colour extends to the ends of the ventrals, usually with two light longitudinal streaks or series of spots; a yellow, black-edged nuchal collar; sometimes a large yellowish blotch on the parietals; labials whitish, edged with black; ventrals yellowish, uniform or edged with black.

Total length 410 millim.; tail 140.

Tropical Africa.

a. ♂ (V. 127; C. ?).	W. Africa.	Haslar Coll. } (Types.)
b. ♂ (V. 129; C. 83).	W. Africa.	Mr. Rich [C.] }
c. Yg. (V. 126; C. 78).	W. Africa.	J. C. Salmon, Esq. [P.]
d. ♀ (V. 134; C. 75).	Ancober River, Gold Coast.	Major Burton & Capt. Cameron [P.]
e. Hgr. ♀ (V. 132; C. ?).	Lagos.	
f. ♂ (V. 130; C. ?).	Old Calabar.	W. Logan, Esq. [P.]
g. ♀ (V. 133; C. 82).	Old Calabar.	
h. ♀ (V. 134; C. ?).	Fernando Po.	Dr. A. Günther [P.]
i. ♀ (V. 135; C. 80).	Fernando Po.	(Type of <i>M. longicauda</i> .) Sir A. Smith [P.]
k. Hgr. ♂ (V. 123; C. ?).	Gaboon.	H. Ansell, Esq. [P.]

#### 15. *Tropidonotus variegatus*.

*Mizodon variegatus*, *Peters, Mon. Berl. Ac.* 1861, p. 358.

Closely allied to the preceding. Loreal deeper than long; two præ- and three postoculars; eight upper labials, fourth and fifth entering the eye; posterior chin-shields twice as long as anterior. Scales smooth, in 15 rows. Ventrals 143; anal divided; subcaudals 76. Head dark brown, anterior part of parietals lighter; sutures between the labials black; a light nuchal collar; a blackish



band along the back: sides variegated black and white; belly dirty white, with a lateral series of black spots.

Total length 328 millim.; tail 106.

Gold Coast.

### 16. *Tropidonotus swinhonis*.

*Tropidonotus swinhonis*, *Günth. Ann. & Mag. N. II.* (4) i. 1868, p. 420, pl. xix. fig. F.

Head narrow and elongate. Eye moderate. Rostral broader than deep, just visible from above; internasals a little broader than long, shorter than the præfrontals; frontal once and a half as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal as long as deep; one præ- and three postoculars; temporals 1+2; six upper labials, third and fourth entering the eye, fifth very long; four lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales strongly keeled, of outer row faintly keeled, in 15 rows. Ventrals 150; anal divided; subcaudals *circa* 50. Brown above, anteriorly with irregular blackish spots; occiput and nape reddish, with a broad black collar; a black spot below the eye, and an oblique black band on the temporal region; lower parts yellowish, powdered with brown on the sides.

Total length 580 millim.; tail about 100.

Formosa.

a. ♀ (V. 150; C.?). Formosa. R. Swinhoe, Esq. [C.]. (Type.)

### 17. *Tropidonotus nuchalis*. (PLATE XIII. fig. 1.)

*Tropidonotus swinhonis*, var., *Günth. Ann. & Mag. N. II.* (6) iv. 1889, p. 221.

— *nuchalis*, *Bouleng. Ann. & Mag. N. II.* (6) vii. 1891, p. 281.

Head as in *T. natrix*. Eye moderate. Rostral broader than deep, just visible from above; internasals as long as broad or a little broader, as long as the præfrontals; frontal once and one third to once and a half as long as broad, as long as or longer than its distance from the end of the snout, a little shorter than the parietals; loreal as long as deep, or deeper; one præ- and two or three postoculars; temporals 1+1 or 1+2; six upper labials, third and fourth entering the eye, fifth very long; four lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales very feebly keeled, of outer row smooth, in 15 rows. A very distinct groove along the middle of the nape. Ventrals 154-165; anal divided; subcaudals 46-50. Olive above, uniform or with small black spots; an oblique black line below the eye, and another between the two last labials; lower parts uniform black, or black in the middle and olive on the sides.

Total length 640 millim.; tail 120.

China.

a-d. ♀ (V. 154, 160, 161, 165; C. 50, 48, 47, 46). Ichang, Upper Yang-tse-Kiang. A. E. Pratt, Esq. [C.]. (Types.)



18. *Tropidonotus natrix*.

- Coluber natrix*, *Linn. S. N.* i. p. 380 (1766); *Daud. Rept.* vii. p. 34, pl. lxxxii. fig. 1 (1803); *Metaxa, Mon. Serp. Rom.* p. 33 (1823).  
*Natrix vulgaris*, *Laur. Syn. Rept.* p. 75 (1768); *Collett, Vidensk. Selsk. Forh. Christ.* 1878, no. 3, p. 2.  
 — *gronoviana*, *Laur. l. c.*  
*Coluber scutatus*, *Pall. Reise*, i. p. 459 (1771).  
 — *bipes*, *Gmel. S. N.* i. p. 1099 (1788).  
 — *gronovianus*, *Gmel. l. c.* p. 1101.  
 — *tyrolensis*, *Gmel. l. c.* p. 1102.  
 — *arabicus*, *Gmel. l. c.*  
 — *helveticus*, *Lacép. Serp.* pp. 100 & 326 (1789); *Daud. t. c.* p. 57.  
 — *torquatus*, *Lacép. l. c.* pp. 100 & 147.  
 — *scopoliannus*, *Daud. Rept.* viii. p. 328 (1803).  
 — *persa*, *Pall. Zoogr. Ross.-As.* iii. p. 41 (1811).  
 — *minutus*, *Pall. l. c.*  
 — *hybridus*, *Merr. Tent.* p. 125 (1820).  
 — *viperinus (non Latr.)*, *Metaxa, l. c.* p. 34.  
*Tropidonotus natrix*, *Boie, Isis*, 1827, p. 534; *Schleg. Phys. Serp.* ii. p. 302 (1837); *Nordm. in Demid. Voy. Russ. Mér.* iii. p. 350 (1840); *Dum. & Bibr.* vii. p. 555 (1854); *Günth. Cat. p.* 61 (1858); *Strauch, Erp. Alg.* p. 58 (1862); *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 207, and *Icon. Gén.* 26, pls. i. & ii. figs. 2-4 (1868); *Viaud-Grandm. Et. Serp. Vend.* p. 12 (1868); *Fatio, Vert. Suisse*, iii. p. 147 (1872); *Anders. Proc. Zool. Soc.* 1872, p. 393; *Strauch, Schl. Russ. R.* p. 141 (1873); *De Betta, Faun. Ital., Rett. Anf.* p. 45 (1874); *Schreib. Herp. Eur.* p. 237 (1875); *Lataste, Herp. Gir.* p. 128 (1876); *Blanf. Zool. E. Pers.* p. 418 (1876); *Leasona, Atti Acc. Tor.* xii. 1877, p. 182, pl. iv.; *Bedriaga, Bull. Soc. Nat. Mosc.* 1881, p. 287; *Ninni, Atti Soc. Ital.* xxiii. 1881, p. 70; *Leydig, Abh. Senck. Ges.* xiii. 1883, p. 169; *Boetty. Zool. Jahrb.* iii. 1888, p. 933; *Bedringa, Amph. et Rept. de Portug.* p. 68 (1889); *Peracca, Boll. Mus. Torin.* v. 1890, no. 92; *Camerano, Monogr. Ofid. Colubr. Ital.* p. 9 (1891); *Bouleng. Tr. Zool. Soc.* xiii. 1891, p. 148; *H. & T. Piel de Churchville, Bull. Soc. H. N. Ouest Fr.* ii. 1892, p. 35, pl. ii.  
 — *hybridus*, *Boie, l. c.*  
*Coluber siculus*, *Cuv. R. A.* 2nd ed., ii. p. 84 (1829); *Bibr. & Bory, Expéd. Se. Morée, Zool.* p. 73, pl. xiv. fig. 1 (1833).  
*Tropidonotus ater*, *Eichw. Zool. Spec.* iii. p. 173 (1831), and *Faun. Casp.-Cauc.* p. 106, pl. xxii. (1841).  
 — *persicus*, *Eichw. Zool. Spec.* iii. p. 173.  
*Coluber bilineatus*, *Bibr. & Bory, l. c.* p. 73, pl. xiv. fig. 2.  
*Natrix torquata*, *Bonap. Icon. Faun. Ital.* (1834); *Bell, Brit. Rept.* p. 47, fig. (1839).  
 — *cetti*, *Gené, Mem. Acc. Torin.* (2) i. 1839, p. 272, pl. iv. fig. 1; *Bonap. Icon. Faun. Ital.* (1840).  
 — *torquata*, vars. *inurorum* & *minax*, *Bonap. Mem. Acc. Torin.* (2) ii. 1839, p. 438.  
*Tropidonotus natrix*, vars. *nigra* & *colchica*, *Nordm. in Demid. op. cit., Rept.* pls. xi. & xii.  
 — *persa*, *Eichw. Faun. Casp.-Cauc.* p. 105, pl. xxi.  
 — *natrix*, var. *picturata*, *Jan, ll. cc.*; *F. Müll. Verh. nat. Ges. Basel*, vii. 1885, p. 681.  
 — *fallax*, *Fatio, l. c.* p. 153.

*Tropidonotus natrix*, var. *concolor*, *F. Müll. l. c.*

— *natrix*, var. *astreptophorus*, *Seoane, Idend. de Lacerta schreiberi*,  
 &c., p. 15 (1885).

Eye moderate. Rostral broader than deep, visible from above; internasals at least as broad as long, trapezoid, shorter than the præfrontals; frontal once and one third to once and a half as long as broad, as long as its distance from the end of the snout or a little shorter, shorter than the parietals; loreal deeper than long; one (rarely two) præ- and three (rarely two or four) postoculars; temporals 1 + 2; seven upper labials, third and fourth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales strongly keeled, of outer row smooth or faintly keeled, in 19 rows. Ventrals 157–190; anal divided; subcaudals 50–88. Grey, olive, or brown above, with black spots or narrow cross-bands; labials white or yellowish, with the sutures between the shields black; belly usually checkered black and white or grey.

Total length 1120 millim.; tail 210. Reaches a length of two metres (6½ feet).

Europe, Algeria, West and Central Asia.

A. The typical form. A white, yellow, or orange collar, usually divided in the middle, sometimes absent, bordered behind by a broad deep black collar, which is constant.

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|--|-----------------------|----------------------------|
| <i>a.</i> ♀ (V. 166; C. 58).   | Hale, near Salisbury. | Rev. H. G. W. Aubrey [P.]  |
| <i>b, c, d-e.</i> ♀ (V. 161, 165; C. 55, 58), hgr. ♂ (V. 173; C. 64), & yg. (V. 166; C. 66). | Devonshire.           |                            |
| <i>f, g, h.</i> Eggs.  | London.               |                            |
| <i>i.</i> ♂ (V. 170; C. 66).   | England.              |                            |
| <i>k.</i> ♂ (V. 166; C. 60).   | Gotland.              | Dr. Eisen [P.]             |
| <i>l.</i> ♀ (V. 172; C. 58).   | Sweden.               | C. J. A. Thuden, Esq. [P.] |
| <i>m-n.</i> ♀ (V. 165, 168; C. 63, 60).  | Near St. Malo.        | G. A. Boulenger, Esq. [P.] |
| <i>o-s.</i> ♂ (V. 175; C. 71), ♀ (V. 165, 169; C. 64, 62), & yg. (V. 177, 172; C. 76, 72).   | Bologna.              | Prof. Bianconi [P.]        |
| <i>t-u.</i> ♂ (V. 176; C. ?) & ♀ (V. 176; C. 60).  | Iliak, E. Turkestan.  | Rev. H. Lansdell [C.]      |
| <i>v.</i> Yg., two-headed monster.   | — ?                   |                            |
| <i>w.</i> Ad., skel.   | — ?                   |                            |
| <i>x, y.</i> Skulls.   | Paris.                |                            |

B. Collar altogether absent, or reduced to a small black blotch on each side of the nape. (Var. *astreptophorus*, *Seoane*.)

- |                              |                       |                      |
|------------------------------|-----------------------|----------------------|
| <i>a.</i> ♀ (V. 157; C. 50). | Corunna.              | M. V. L. Seoane [P.] |
| <i>b.</i> ♂ (V. 166; C. 77). | Albufera de Valencia. | Lord Lilford [P.]    |

- c. ♀ (V. 161; C. 61). Spain. P. B. Webb, Esq. [P.]  
 d. ♂ (V. 163; C. 73). Oporto. Dr. H. Gadow [C.]  
 e-f. ♂ (V. 177; C. 74) Cyprus. Lord Lilford [P.]  
 & yg. (V. 162; C. 64).
- C. Collar well-marked though widely interrupted in the middle; a yellowish streak along each side of the back. (*C. persa*, Pall., *C. bilineatus*, Bibr., var. *murorum*, Bp.)
- a-b. Hgr. ♀ (V. 173, Bologna. Prof. Bianconi [P.]  
 172; C. 57, 60).  
 c. ♀ (V. 175; C. 65). Zara, Dalmatia. Dr. F. Werner [E.]  
 d. Hgr. ♂ (V. 176; Epidaurus. Rev. W. Hennah [P.]  
 C. 79).  
 e-h. ♀ (V. 177; C. 64) Smyrna. R. McAndrew, Esq. [P.]  
 & yg. (V. 174, 164, 163; C. 74, 56, 56).  
 i. Yg. (V. 174; C. 66). Valley of the R. McAndrew, Esq. [P.]  
 Meinder.  
 k. ♀ (V. 170; C. 63). Xanthus. Sir C. Fellows [P.]  
 l. ♀ (V. 171; C. ?). Shores of the J. Miller, Esq. [P.]  
 Mediterranean.
- D. Black above, checkered black and white inferiorly. (*C. scutatus*, Pall., var. *nigra*, Nordm.)
- a. ♀ (V. 174; C. 70). Epidaurus. Rev. W. Hennah [P.]  
 b. Yg. (V. 173; C. 65). Enzeli, on the W. T. Blanford, Esq. [E.]  
 Caspian Sea, N.  
 Persia.
- E. Uniform black above and below. (*T. ater*, Eichw.)
- a. ♀ (V. 161; C. 51). Gotland. Dr. Eisen [P.]  
 b. ♀ (V. 158; C. 53). Morea.

19. *Tropidonotus vibakari*.

*Tropidonotus vibakari*, *Boie, Isis*, 1826, p. 207; *Schleg. Phys. Serp.* ii. p. 316 (1837), and *Faun. Japon., Rept.* p. 87, pl. v. (1838); *Dum. & Bibr.* vii. p. 595 (1854); *Günth. Cat.* p. 80 (1858); *Jan. Arch. Zool. Anat. Phys.* iii. 1865, p. 216; *Strauch, Schl. Russ. R.* p. 174 (1873); *Bouleng. Ann. & Mag. N. H.* (6) v. 1890, p. 139.  
 — *martensii*, *Hilgend. Sitzb. Ges. Naturf. Fr.* 1880, p. 115.

Eye moderate. Rostral broader than deep, scarcely visible from above; internasals as broad as long, trapezoid, shorter than the præfrontals; frontal once and one third to once and a half as long as broad, as long as or a little longer than its distance from the end of the snout, shorter than the parietals; loreal as long as deep, or deeper; one (rarely two) præ- and three (rarely two) postoculars; temporals 1+1 or 1+2; seven (rarely eight) upper labials, third and fourth (or third, fourth, and fifth) entering the eye; four (rarely five) lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales more or less strongly keeled, of outer row smooth or faintly keeled, in 19 rows. Ventrals 127-151;

anal divided; subcaudals 59-79. Reddish brown or olive above, with a more or less marked blackish or dark olive vertebral stripe, and small blackish spots; an oblique yellow dark-edged band on each side of the nape, the two converging posteriorly; upper labials yellow, with black sutures; lower parts yellow, with a lateral series of brown dots or short lines.

Total length 440 millim.; tail 100.

Mantchuria, Japan, Formosa.

a-b. ♂ (V. 150, 151; C. 59, 60).	Chaborowka, on the Ussuri.	Hr. Dörries [C.].
c-d. Yg. (V. 137, 137; C. 62, 65).	Japan.	A. Adams, Esq. [C.].
e-f. ♂ (V. 148; C. 74) & ♀ (V. 144; C. 79).	Japan.	Leyden Museum.
h. ♂ (V. 148; C. ?).	Japan.	Dr. Bleeker.
i. ♀ (V. 144; C. 68).	Yokohama.	H.M.S. 'Challenger.'
k. Yg. (V. 145; C. 73).	Kobe.	H.M.S. 'Challenger.'
l. ♀ (V. 127; C. 73).	Formosa.	R. Swinhoe, Esq. [C.].

## 20. *Tropidonotus conspicillatus*.

*Tropidonotus conspicillatus*, Günth. *Proc. Zool. Soc.* 1872, p. 596, fig.; *Boetty. Ber. Offenb. Ver. Nat.* 1892, p. 109.

Eye moderate. Nostril in an entire or semidivided nasal; rostral twice as broad as deep, scarcely visible from above; internasals as long as broad or a little longer, broadly truncate in front, nearly as long as the præfrontals; frontal once and a half to once and two thirds as long as broad, a little longer than its distance from the end of the snout, shorter than the parietals; loreal deeper than long; one præ- and three postoculars; temporals 1+2 (or 1+3); eight upper labials, third, fourth, and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows, all keeled (or outer row smooth). Ventrals 138-147; anal divided; subcaudals 40-53. Brown or reddish above, with a dark network and two longitudinal series of yellowish spots or cross-lines; a yellow, black-edged streak along the upper lip, and another from the eye to the angle of the mouth; nape blackish, with two interrupted yellow transverse streaks; yellowish below, uniform or speckled with brown.

Total length 400 millim.; tail 75.

Borneo, Sumatra\*.

a-b. ♂ (V. 142; C. 49) & ♀ (V. 140; C. 49).	Matang.	} (Types.)
c. Hgr. (V. 142; C. ?).	Borneo.	
d. ♀ (V. 147; C. 53).	Mt. Dulit, Borneo.	
	L. L. Dillwyn, Esq. [P.]. C. Hose, Esq. [C.].	

\* I have examined a specimen from Sinkep Isd., preserved in the Indian Museum, Calcutta.



21. *Tropidonotus parallelus*. (PLATE XIII. fig. 2.)

*Tropidonotus dipsas* (*non Blyth*), *Anders. An. Zool. Res. Yunnan*, p. 819 (1879).

— *parallelus*, *Bouleng. Faun. Ind., Rept.* p. 345 (1890).

Eye moderate. Rostral broader than deep, just visible from above; internasals as long as broad, as long as or a little shorter than the prefrontals; frontal once and a half to once and two thirds as long as broad, longer than its distance from the end of the snout, shorter than the parietals; loreal as long as deep; one or two (or three) præoculars; three postoculars; temporals 1+1, 1+2, or 2+2; eight upper labials normally, third, fourth, and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows, strongly keeled, those of the outer row more or less distinctly keeled. Ventrals 163-175; anal divided; subcaudals 73-95. Olive brown above, the scales edged with blackish, with two yellowish, black-edged dorsal stripes running along the back and tail; a short yellow longitudinal streak behind the occiput; a black streak from the eye to the commissure of the mouth; labials yellow; ventrals and subcaudals uniform yellow, or with a black dot on each side.

Total length 560 millim.; tail 140.

Sikkim, Khasi Hills, hills of Upper Burmah and Yunnan.

a. ♂ (V. 166; C. 75).	Sikkim.	Sir J. Hooker [P.].	} (indiv.)
b. ♂ (V. 167; C. 78).	Khasi Hills.	Sir J. Hooker [P.].	
c-d. ♂ (V. 163, 167; C. 73, 73).	Khasi Hills?	T. C. Jerdoun, Esq. [P.].	
e. ♂ (V. 172; C. 86).	Sanda, Upper Irrawaddy.	Dr. J. Anderson [P.].	
f. ♀ (V. 167; C. ?).	Hotha Valley, Yunnan.	Dr. J. Anderson [P.].	

22. *Tropidonotus khasiensis*. (PLATE XIII. fig. 3.)

*Tropidonotus khasiensis*, *Bouleng. Faun. Ind., Rept.* p. 344 (1890).

Eye moderate. Rostral broader than deep, scarcely visible from above; internasals as long as broad, broadly truncate in front, nearly as long as the prefrontals; frontal once and a half as long as broad, slightly longer than its distance from the end of the snout, shorter than the parietals; loreal as long as deep or a little longer than deep; one or two præoculars; three postoculars; temporals 1+1; nine upper labials normally, fourth, fifth, and sixth entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows, rather strongly keeled, the outer row smooth. Ventrals 150-154; anal divided; subcaudals 80-100. Pale brown above, some of the scales edged with darker; head speckled with black, or with more or less distinct yellowish dots or vermiculations; labials yellow in the

middle and dark brown on the borders: an oblique yellow streak edged with dark brown on each side of the nape, forming the continuation of the series of yellow labial spots; ventrals and subcaudals yellowish, with an interrupted brown streak or series of spots along each side.

Total length 600 millim.; tail 190.

Khasi Hills, Assam.

- |      |                                     |              |                          |            |
|------|-------------------------------------|--------------|--------------------------|------------|
| a-c. | ♀ (V. 150, 150, 152; C. 96, ?, 80). | Khasi Hills. | T. C. Jerdon, Esq. [P.]. | } (Types.) |
| d.   | Yg. (V. 154; C. 100).               | Khasi Hills. | Sir J. Hooker [P.].      |            |

### 23. *Tropidonotus trianguligerus*.

*Tropidonotus trianguligerus*, *Boie, Isis*, 1827, p. 535; *Schleg. Phys. Serp.* ii. p. 311, pl. xii. figs. 1-3 (1837); *Dum. & Bibr.* vii. p. 590 (1854); *Günth. Cat.* p. 70 (1858), and *Rept. Brit. Ind.* p. 261 (1864); *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 225, and *Icon. Gén.* 27, pl. ii. figs. 2 & 3 (1868); *Fischer, Arch. f. Nat.* 1882, p. 282; *Anders. Journ. Linn. Soc.* xxi. 1889, p. 345.

— *umbratus*, part., *Cantor, Cat. Mal. Rept.* p. 89 (1847).

— *junceus*, (*non Cant.*) *Girard, U.S. Explor. Exped., Herp.* 145, pl. xiii. fig. 1 (1858).

? *Tropidonotus bellulus*, *Stoliczka, Journ. As. Soc. Beng.* xl. 1871, p. 432, pl. xxvi. fig. 2.

*Tropidonotus trianguligerus*, var. *annularis*, *Fischer, Arch. f. Nat.* 1885, p. 55.

Eye moderate. Rostral nearly twice as broad as deep, scarcely visible from above; internasals longer than broad, trapezoid, as long as or longer than the præfrontals; frontal once and a half to once and three fourths as long as broad, as long as its distance from the end of the snout, a little shorter than the parietals; loreal as long as deep or deeper; one (rarely two) præ- and three or four postoculars; temporals 2+2 or 2+3; nine upper labials, fourth, fifth, and sixth entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales strongly keeled, of outer row smooth or feebly keeled, in 19 rows. Ventrals 134-147; anal divided; subcaudals 67-94. Dark olive above, with small black spots; usually a lateral series of large triangular black spots, with the points extending down to the ventrals, separated by red interspaces; these markings becoming indistinct or disappearing on the posterior half of the body; in some specimens (var. *annularis*, Fisch.) the black lateral spots extend as bands across the belly; upper labials yellowish, with black sutures; lower parts yellowish, uniform or the shields edged with black.

Total length 1200 millim.; tail 340.

Southern Burma, Malay Peninsula, Sumatra, Borneo, Java, Ternate.

- |          |                                   |            |                      |
|----------|-----------------------------------|------------|----------------------|
| a.       | ♂ (V. 142; C. ?).                 | Pinang.    | Dr. A. Günther [P.]. |
| b, c, d. | ♀ (V. 136; C. ?)                  | Singapore. | Gen. Hardwicke [P.]. |
|          | & hgr. ♂ (V. 136, 140; C. 67, ?). |            |                      |

- e. Hgr. ♂ (V. 138; C. 72). Singapore. Dr. Dennys [P.]
- f-g. Hgr. ♂ (V. 146, 135; C. ♀, 80). District of Deli, Sumatra. Prof. Moesch [C.]
- h-l. ♀ (V. 145, 146, 144, 145; C. ♀, ♀, ♀, 94). Nias. Hr. Sundermann [C.]
- m-p. ♂ (V. 140, 139; C. ♀, ♀) & ♀ (V. 139, 135; C. 73, 70). Borneo. L. L. Dillwyn, Esq. [P.]
- q. ♀ (V. 137; C. ?). Rejang River, Sarawak. Brooke Low, Esq. [P.]
- r-t. ♂ (V. 132; C. 81) & yg. (V. 131, 132; C. 79, ♀). Telang and Lihong Bahaja, S.E. Borneo. Hr. Grabowsky [C.] (Types of var. *annularis*.)
- u. ♂ (V. 139; C. 69). Java. Dr. Ploem [C.]
- v. Yg. (V. 146; C. ?). Ternate. H.M.S. 'Challenger.'

#### 24. *Tropidonotus petersii*. (PLATE XIV. fig. 1.)

*Tropidonotus maculatus* (*non Edeling*), *Peters, Mon. Berl. Ac.* 1871, p. 575.

— *sundanensis* (*non Günth.*), *Peters, Ann. Mus. Genova*, iii. 1872, p. 36.

Eye moderate. Rostral broader than deep, scarcely visible from above; internasals as broad as long, as long as the præfrontals; frontal once and one third as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal deeper than long; one præ- and three or four postoculars; temporals 2+3; nine upper labials, fourth, fifth, and sixth entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows, all strongly keeled. Ventrals 140-150; anal divided; subcaudals 65-78. Brown above, with small black spots; a lateral series of black spots; upper surface of head dark olive, vermiculated with black; labials yellowish, with black sutures; yellowish inferiorly, the shields edged with black.

Total length 370 millim.; tail 100.

Borneo.

- a. Hgr. ♂ (V. 140; C. 76). Borneo. A. R. Wallace, Esq. [C.]

II. *NERODIA*.—Maxillary teeth not more than 30, the hinder gradually enlarged. Eyes rather small and, like the nostrils, directed upwards and outwards; internasal shields usually much narrowed in front.

#### 25. *Tropidonotus melanogaster*.

*Tropidonotus grahamii*, part., *Günth. Cat.* p. 78 (1858).

— *melanogaster*, *Peters, Mon. Berl. Ac.* 1864, p. 380; *Günth. Zool. Rec.* 1865, p. 154.

— *mesomelanus*, *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 230, and *Icon. Gén.* 27, pls. v. fig. 3 & vi. fig. 2 (1868).

*Tropidonotus baronis-mülleri*, *Troschel*, in *Müll. Reis. Mexico*, iii. p. 610 (1865).

*Eutænia melanogaster*, *Cope*, *Proc. Am. Philos. Soc.* xxii. 1885, p. 386.

*Regina mesomelana*, *Cope*, *Bull. U.S. Nat. Mus.* no. 32, p. 74 (1887); *Dugès*, *La Natureza*, (2) i. 1888, p. 130.

Eye rather small. Rostral broader than deep, visible from above; internasals as long as broad or longer, subtriangular, truncate in front, as long as the præfrontals; frontal once and two thirds to twice as long as broad, as long as or longer than its distance from the end of the snout, a little shorter than the parietals; loreal longer than deep; two (rarely three) præ- and two or three (rarely four) postoculars; temporals 1+2 or 1+3; eight upper labials, fourth and fifth entering the eye; five (rarely four) lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows, strongly keeled, outer row perfectly smooth or faintly keeled, second smooth or feebly keeled. Ventrals 140-159; anal entire; subcaudals 45-79. Olivo-brown above, without or with very small black spots; a more or less distinct pale lateral stripe running along the second or second and third rows of scales; throat yellowish; belly and lower surface of tail black in the middle, olive or plumbeous on the sides, or pale greyish with a median series of more or less confluent small black spots.

Total length 580 millim.; tail 140.

Mexico.

- |  |  |
|--|--|
| <i>a-f.</i> ♂ (V. 159, 152, 154, 155; C. 71, 67, 62, 68), ♀ (V. 150; C. 55), & hgr. (V. 152; C. 55). | Mexico.  |
| <i>g-i.</i> ♂ (V. 152; C. 66), ♀ (V. 150; C. 55), & yg. (V. 149; C. 64).                             | Plateau of Mexico, near the city. P. Geddes, Esq. [P.].                        |
| <i>k.</i> ♀ (V. 140; C. 71).   | La Laguna, Juana-catlan, Jalisco, 6500 feet. Dr. A. C. Buller [C.].            |
| <i>l-m.</i> ♀ (V. 148; C. 63) & yg. (V. 153; C. 79).   | Colonia Brizuela, Hacienda El Rosario, Autlan, Jalisco. Dr. A. C. Buller [C.]. |
| <i>n, o.</i> ♂ (V. 156, 156; C. 66, 66).   | Tehuantepec.   |
| <i>p.</i> Yg. (V. 142; C. 66).   | W. Mexico.   |

## 26. *Tropidonotus lævissimus*.

*Natrix lævissima*, *Günth. Ann. & Mag. N. H.* (3) ix. 1862, p. 124, pl. ix. fig. 4.

*Neusterophis lævissima*, *Günth. Proc. Zool. Soc.* 1863, p. 16.

Eye rather small. Rostral broader than deep, just visible from



above; nostrils directed upwards; internasals narrow, shorter than the præfrontals; frontal twice as long as broad, longer than its distance from the end of the snout, shorter than the parietals; loreal longer than deep; one præ- and two postoculars; temporals 1+2; eight upper labials, fourth and fifth entering the eye; four lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales perfectly smooth, in 19 rows. Ventrals 175; anal entire; subcaudals 76. Black, ventrals and subcaudals yellowish on the sides.

Total length 850 millim.; tail 200.

Africa?

a. ♂ (V. 176; C. 76). —? Chatham Museum. (Type.)

### 27. *Tropidonotus olivaceus*.

*Coronella olivacea*, *Peters, Mon. Berl. Ac.* 1854, p. 622; *Günth. Cat.* p. 39 (1858); *Bocage, Journ. Sc. Lisb.* i. 1860, p. 66; *Peters, Reise n. Mossamb.* iii. p. 114, pl. xvii. fig. 1 (1882); *Mocquard, Bull. Soc. Philom.* (7) xi. 1887, p. 60, and *Mém. Cent. Soc. Philom.* 1888, p. 128.

— (Meizodon) *dumerilii*, *Günth. Proc. Zool. Soc.* 1860, p. 429, fig.

*Enicognathus punctatostriatus*, *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 278, and *Icon. Gén.* 16, pl. iv. fig. 4 (1866).

*Neusterophis atratus*, *Peters, Mon. Berl. Ac.* 1877, p. 614, pl. —. fig. 1; *Günth. Proc. Zool. Soc.* 1888, p. 51.

*Coronella (Mizodon) olivacea*, *Boettg. Ber. Senckenb. Ges.* 1888, p. 48.

Eye moderate. Rostral a little broader than deep, visible from above; internasals as long as broad, as long as or a little shorter than the præfrontals; frontal once and two thirds to twice as long as broad, longer than its distance from the end of the snout, shorter than the parietals; loreal as long as deep or deeper than long; one (rarely two) præ- and three (exceptionally two) postoculars; temporals 1+2; eight upper labials, fourth and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows. Ventrals 131–149; anal divided; subcaudals 55–85. Olive or brown above, with a more or less distinct darker vertebral band, four or five scales wide, bordered on each side by a series of whitish dots; flanks and ends of ventrals olive; upper lip yellowish, the sutures between the shields black; ventrals yellowish, sometimes edged with olive.

Total length 580 millim.; tail 145.

Tropical Africa.

a-b, c. ♂ (V. 138; C. ?), South of Chartoum. Consul Petherick  
 ♀ (V. 136; C. 59), [C.]  
 & yg. (V. 131; C. 71).



d. ♀ (V. 137; C. 55).	Monbuttu, Upper Congo.	Dr. Emin Pasha [P.].
e. Yg. (V. 135; C. 69).	Congo.	
f. Hgr. ♂ (V. 143; C. 85).	Gold Coast.	H. H. Evans, Esq. (Type of <i>C. dumerilii</i> .)
g. ♀ (V. 136; C. ?).	Gaboon.	
h-i. ♂ (V. 136, 146; C. ?, 84).	Coast of Zanzibar.	
k. ♀ (V. 139; C. ?).	Zambesi Expedition.	Sir J. Kirk [C.].
l. ♂ (V. 144; C. 65).	Quellimane.	Sir J. Kirk [C.].
m, n. ♀ (V. 145, 149; C. ?, ?).	Africa.	

### 28. *Tropidonotus pygæus*.

*Contia pygæa*, Cope, *Proc. Ac. Philad.* 1871, p. 223; *Garm. N. Am. Rept.* p. 93, pl. vii. fig. 5 (1883).

Eye moderate. Rostral much broader than deep, visible from above; nasal semidivided; internasals small and subtriangular, truncate in front; frontal a little shorter than the præfrontals, once and two thirds to once and three fourths as long as broad, longer than its distance from the end of the snout, shorter than the parietals; loreal as long as deep or deeper than long; one præ- and two postoculars; temporals 1+2; eight upper labials, fourth and fifth, or third, fourth, and fifth, entering the eye; five lower labials in contact with the anterior chin-shields, which are a little shorter than the posterior. Scales in 17 rows, smooth, faintly keeled on the tail. Ventrals 120-133; anal divided; subcaudals 35-54. Black above, with a very faint pale line along the centre of each scale of several lateral series; the lines more distinct near the vent and on the tail; beneath pale, posterior half of body and tail red, each ventral shield with a short black cross bar on the anterior margin.

Total length 300 millim.; tail 50.

North Carolina to Florida.

a-b. ♀ (V. 121, 123; C. 40, 38).	Lake Kerr, Florida.	A. Erwin Brown, Esq. [P.].
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### 29. *Tropidonotus punctulatus*. (PLATE XIV. fig. 2.)

*Tropidonotus punctulatus*, Günth. *Cat.* p. 247 (1858), and *Ann. & Mag. N. H.* (4) i. 1868, p. 420, and *Zool. Rec.* 1870, p. 74; *Theob. Cat. Rept. Brit. Ind.* p. 173 (1876); *Bouleng. Faun. Ind., Rept.* p. 350 (1890).

*Fowlea peguensis*, *Theob. Cat. Rept. As. Soc. Mus.* p. 57 (1868).

Eye rather small. Rostral broader than deep, visible from above, forming a narrow suture with the internasals, which are much narrowed anteriorly and nearly as long as the præfrontals; frontal nearly twice as long as broad, longer than its distance from the end

of the snout, nearly as long as the parietals; loreal as long as deep; one præ- and two or three postoculars; temporals 2+2 or 2+3; nine (exceptionally ten) upper labials, fourth and fifth (or fifth and sixth) entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 17 rows, smooth or faintly keeled. Ventrals 142-154; anal divided; subcaudals 62-83. Brown or black above, with small pale markings or dots; two outer rows of scales, and the ventrals and subcaudals yellowish with dark margins; upper lip uniform yellowish; frequently a light, curved, longitudinal streak on each side of the nape.

Total length 600 millim.; tail 150.

Pegu, Burma.

- |   |       |                             |
|---|-------|-----------------------------|
| a. ♀ (V. 142; C. 62).   | — ?   | Zoological Society. (Type.) |
| b-c. ♂ (V. 144, 144;<br>C. 70, 83) & ♀ (V.<br>154, 154; C. 78, 80). | Pegu. | W. Theobald, Esq. [C.].     |

### 30. *Tropidonotus modestus*. (PLATE XIV. fig. 3.)

*Tropidonotus modestus*, Günth. *Proc. Zool. Soc.* 1875, p. 232; *Anders. An. Zool. Res. Yunnan*, p. 817 (1879); *Bouleng. Faun. Ind., Rept.* p. 343 (1890).

Eye rather small. Rostral twice as broad as deep, just visible from above; internasals as long as broad, shorter than the præ-frontals; frontal once and a half to once and two thirds as long as broad, longer than its distance from the end of the snout, shorter than the parietals; loreal longer than deep; one (or two) præ- and two or three postoculars; temporals 1+1 (1+2, or 2+2); nine upper labials, fourth, fifth, and sixth entering the eye; five lower labials in contact with the anterior chin-shields, which are a little shorter than the posterior. Scales in 19 rows, feebly keeled. Ventrals 154-168; anal divided; subcaudals 96-122. Olive-brown above, with small black spots, and a more or less distinct series of small yellowish spots, or a yellowish stripe, along each side of the back; sutures between the labials black; lower surfaces yellowish, with a series of blackish spots on each side of the ventrals, or yellowish in the middle and blackish on the sides, or nearly entirely blackish.

Total length 600 millim.; tail 180.

Khasi Hills and Western Yunnan.

- |   |                               |                                      |
|---|-------------------------------|--------------------------------------|
| a-b. ♂ (V. 166, 163;<br>C. 114, ?).               | Khasi Hills.                  | T. C. Jerdon, Esq. [P.].<br>(Types.) |
| c-d. ♂ (V. 168; C. ?)<br>& ♀ (V. 169; C.<br>102). | Cherra Punji, Khasi<br>Hills. | Dr. J. Anderson [P.].                |

31. *Tropidonotus sancti-johannis*. (PLATE XV. fig. 1.)

*Tropidonotus quincunciatus*, var., *Günth. Cat.* p. 66 (1858), and *Rept. Brit. Ind.* p. 261 (1864); *Blanf. Journ. As. Soc. Beng.* xxxix. 1870, p. 371; *Stoliczka, Journ. As. Soc. Beng.* xl. 1871, p. 432, pl. xxvi. fig. 1.

— *sancti-johannis*, *Bouleng. Faun. Ind., Rept.* p. 350 (1890).

Very closely allied to *T. piscator*, but scales feebly keeled, sometimes nearly smooth, the two to four outer rows smooth; frequently fourth labial only entering the eye. Ventrals 134–158; subcaudals 80–98. Pale olive above, uniform or with black spots arranged quincuncially, or with two series of whitish spots along the body; belly uniform yellowish.

Total length 1100 millim.; tail 290.

Should perhaps rank as a variety of *T. piscator*.

Himalayas; North-west and Central Provinces, India.

a. Yg. (V. 158; C. 85).	Cashmere.	Sir O. B. St. John [C]. W. T. Blanford, Esq. [P.]. (Type.)
b-h. ♂ (V. 140, 143, 143, 143; C. 98, 94, 96, 86) & ♀ (V. 153, 151, 154; C. 87, 80, 84).	Nepal.	B. H. Hodgson, Esq. [P.].
i. ♀ (V. 156; C. ?).	Kulu, Himalayas.	Messrs. v. Schlagintweit [C.].
k. ♂ (V. 143; C. ?).	Jamu, Himalayas.	Messrs. v. Schlagintweit [C.].
l. ♀ (V. 151; C. 82).	Darjeeling.	T. C. Jerdon, Esq. [P.].
m. ♂ (V. 141; C. 88).	Chanda, Central Provinces.	W. T. Blanford, Esq. [P.].
n. ♂ (V. 134; C. 88).	Sharigh, near Harnai.	W. T. Blanford, Esq. [P.].

32. *Tropidonotus piscator*.

*Russell, Ind. Serp.* i. pls. xx., xxviii., & xxxiii. (1796), and ii. pls. iii., v., xiv., & xv. a (1801).

*Hydrus piscator*, *Schneid. Hist. Amph.* i. p. 247 (1799).

— *palustris*, *Schneid. l. c.* p. 249.

*Coluber anostomosatus*, *Daud. Rept.* vii. p. 140 (1803).

— *umbratus*, *Daud. l. c.* p. 144.

— *braminus*, *Daud. l. c.* p. 176.

— *mortuarius*, *Daud. l. c.* p. 187.

— *dora*, *Daud. l. c.* p. 191.

*Enhydrys piscator*, *Oken, Lehrb. Naturg.* iii. p. 233 (1816).

*Coluber bengalensis*, *Gray, Ill. Ind. Zool.* ii. pl. lxxxii. fig. 1 (1834).

— *rectangulus*, *Gray, l. c.* fig. 2.

*Tropidonotus melanozostus*, *Boie, Isis*, 1826, p. 206.

— *piscator*, *Boie, Isis*, 1827, p. 535.

— *mortuarius*, *Boie, l. c.*

*Coluber hippus*, *Reuss, Mus. Senckenb.* i. 1834, p. 150, pl. ix. fig. 2.

- Tropidonotus quineunciatus*, part., *Schleg. Phys. Serp.* ii. p. 307, pl. xii. figs. 4 & 5 (1837); *Dum. & Bibr.* vii. p. 592 (1854); *Günth. Cat.* p. 63 (1858), and *Rept. Brit. Ind.* p. 260 (1864).  
 — *umbratus*, *Schleg. l. c.* p. 300.  
 — —, part., *Cantor, Cat. Mal. Rept.* p. 89 (1847).  
*Amphiesma flavipunctatum*, *Hallow. Proc. Ac. Philad.* 1860, p. 503.  
*Tropidonotus tytleri*, *Blyth, Journ. As. Soc. Beng.* xxxii. 1863, p. 88.  
 — *flavipunctatus*, *Günth. Rept. Brit. Ind.* p. 270.  
 — *striolatus*, *Theob. Cat. Rept. As. Soc. Mus.* p. 55 (1868).  
 — *quineunciatus*, *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 224, and *Icon. Gén.* 27. pl. i. (1868); *Stoliczka, Journ. As. Soc. Beng.* xxxix. 1870, p. 190; *Anders. An. Zool. Res. Yunnan*, p. 821 (1879); *Boettg. Ber. Offenb. Ver. Naturk.* 1888, p. 76.  
 — *piscator*, part., *Bouleng. Faun. Ind., Rept.* p. 349, fig. (1890).

Eye rather small, shorter than its distance from the nostril in the adult. Rostral visible from above; internasals much narrowed anteriorly, subtriangular, with the anterior angle truncated, as long as the præfrontals; frontal once and two thirds to twice as long as broad, longer than its distance from the end of the snout, as long as the parietals or a little shorter; loreal nearly as long as deep; one præ- and three (rarely four) postoculars; temporals 2+2 or 2+3 (rarely 1+2); nine upper labials, fourth and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales more or less strongly keeled, of two or three outer rows smooth, in 19 rows. Ventrals 125-150; anal divided; subcaudals 70-90. Yellowish or pale olive above, with black spots or stripes; two oblique black streaks, one below and the other behind the eye.

Total length 1200 millim.; tail 300.

India, Burma, Southern China, Indo-China, Malay Peninsula and Archipelago.

A. Above with black spots arranged quineunciately; these spots may be so large as to occupy nearly the whole upper surface, the animal appearing black with small yellowish spots; belly uniform yellowish.

<i>a, b.</i> Hgr. ♀ (V. 148, 150; C. 87, ?).	Sind.	Messrs. v. Schlagintweit [C.].
<i>c, d.</i> ♀ (V. 150, 141; C. ?, 90).	Bombay.	Dr. Leith [P.].
<i>e-f.</i> Yg. (V. 141, 134; C. ?, ?).	Benares.	Dr. Sayer [P.].
<i>g-h.</i> ♂ (V. 140; C. 90) & yg. (V. 136; C. 84).	Madras.	Sir W. Elliot [P.].
<i>i.</i> Yg. (V. 136; C. 84).	Madras.	J. E. Boileau, Esq. [P.].
<i>k, l.</i> ♂ (V. 141; C. ?) & yg. (V. 138; C. 85).	Anamallays.	Col. Beddome [C.].
<i>m.</i> ♀ (V. 147; C. 71).	Sikkim.	Sir J. Hooker [P.].
<i>n.</i> ♀ (V. 149; C. 84).	India.	
<i>o.</i> Hgr. ♂ (V. 133; C. 87).	Near Toungoo.	E. W. Oates, Esq. [P.].
<i>p.</i> ♀ (V. 143; C. ?).	Singapore.	Gen. Hardwicke [P.].
<i>q-r.</i> ♀ (V. 145, 147; C. 73, 83).	Java.	Dr. Horsfield.



B. Above with black spots arranged quincuncially; ventral shields edged with black.

s. ♀ (V. 141; C. 70).	Canton.	Haslar Collection.
t-u. ♀ (V. 136, 135; C. ♀, ♀).	Siam.	M. Mouhot [C.].
v. ♀ (V. 138; C. ♀).	Camboja.	M. Mouhot [C.].
w. ♂ (V. 130; C. 79).	Pinang.	Dr. Cantor.
x. Hgr. ♂ (V. 134; C. 75).	Java.	Dr. Horsfield.
y. Skull.	Java.	

C. Above with black stripes, four on the nape, five on the body; ventral shields edged with black. (*T. melanozostus*, Boie.)

z. ♀ (V. 145; C. ♀).	Borneo.
a. Yg. (V. 141; C. 70).	Java.

### 33. *Tropidonotus asperrimus*. (PLATE XV. fig. 2.)

*Tropidonotus quincunciatus*, var., *Günth. Cat.* p. 66 (1858), and *Rept. Brit. Ind.* p. 261 (1864); *F. Müll. Verh. nat. Ges. Basel*, viii. 1887, p. 264.

— *piscator*, part., *Bouleng. Faun. Ind., Rept.* p. 349 (1890).

— *asperrimus*, *Bouleng. Ann. & Mag. N. H.* (6) vii. 1891, p. 281; *F. Müll. Festschr. nat. Ges. Basel*, 1892, p. 204.

Very closely allied to *T. piscator*, but scales very strongly keeled, the keels forming sharp, strongly raised, continuous lines along the hinder part of the body and on the tail; only the outer row of scales smooth. Ventrals 130-146; subcaudals 64-95. Anterior half of body pale olive or reddish, with two series of more or less distinct alternating large roundish or rhomboidal, dark olive or brown, black-edged spots, which are partly confluent on the vertebral line and sometimes form a sinuous band; posterior part of body uniform dark olive, or olive with blackish spots arranged quincuncially; two oblique black lines, one below, the other behind the eye; lower parts uniform yellowish.

Total length 820 millim.; tail 210.

Ceylon.

a-b, c-d. ♀ (V. 131; C. 64) & yg. (V. 138, 137, 142; C. 90, 90, 80).	Ceylon.	Dr. Kelaart.
e. ♀ (V. 141; C. 81).	Near Candy.	Capt. Gaseoigne [P.].
f. Hgr. (V. 143; C. 83).	Punduloya, 4000 ft.	E. E. Green, Esq. [P.].
g. Yg. (V. 137; C. ♀).	Ceylon.	Sir A. Smith [P.].
h. Yg. (V. 131; C. 85).	Ceylon.	Col. Beddome [C.].
i. ♂ (V. 133; C. 85).	Ceylon.	Zoological Society.
k-l, m-n. ♀ (V. 137, 146; C. ♀, 83), hgr. (V. 138; C. ♀), & yg. (V. 137; C. 71).	Ceylon.	

34. *Tropidonotus annularis*.

*Tropidonotus annularis*, *Hallow. Proc. Ac. Philad.* 1856, p. 151; *Günth. Cat.* p. 67 (1858), and *Rept. Brit. Ind.* p. 261 (1864); *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 223.

— *chinensis*, *Berthold, Götting. Nachr.* 1859, p. 180.

Eye rather small. Rostral broader than deep, just visible from above; nasal usually semidivided; internasals longer than broad, much narrowed anteriorly, as long as or longer than the præfrontals; frontal once and two thirds to twice as long as broad, as long as its distance from the end of the snout, much shorter than the parietals; loreal as deep as long or longer; one præocular; two postoculars + one subocular; temporals 2+3 (rarely 1+3); eight or nine upper labials, fourth or fifth (rarely fourth and fifth) entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales very strongly keeled, of outer row smooth, in 19 rows. Ventrals 145-161; anal divided; subcaudals 54-69. Olive above, with small black spots; labials yellow, with black sutures; sides and lower parts yellow or red, with regular black cross bands, which may be interrupted in the middle.

Total length 820 millim.; tail 150.

China.

*a-d.* ♀ (V. 148, 147, 145; Mountains North of A. E. Pratt, Esq. [C.].  
C. 54, ?, ?) & yg. (V. 153; Kiu Kiang.  
C. 69).

*e.* Yg. (V. 151; C. 57). Chi Kiang. Mr. Fortune [C.].

*f.* ♂ (V. 161; C. 60). Ningpo.

*g, h.* ♀ (V. 147, 153; C. ?, Formosa. R. Swinhoe, Esq. [C.].

54).

35. *Tropidonotus tessellatus*.

*Coronella tessellata*, *Laur. Syn. Rept.* p. 87 (1768).

*Coluber hydrus*, *Pall. Reise*, i. p. 459 (1771); *Daud. Rept.* vi. p. 438 (1803); *Pall. Zoogr. Ross.-As.* iii. p. 36 (1811); *Rathke, Mém. Sav. Etr. Ac. St. Pétersb.* iii. 1837, p. 306, pl. i. figs. 1-7.

— *tessellatus*, *Bonnat. Encycl. Méth., Ophiol.* p. 60 (1790); *Mikan, in Sturm, Deutschl. Faun.* iii. Heft 4, pl. — (1805); *Frivaldsky, Mon. Serp. Hung.* p. 46 (1825).

— *hydrophilus*, *Lindaker, Abh. Böhm. Ges. Wiss.* i. 1791, p. 123.

*Enhydria caspia*, *Oken, Lehrb. Naturg.* iii. p. 232 (1816).

*Coluber gabinus*, *Metaxa, Mon. Serp. Rom.* p. 34, pl. —. fig. 1 (1823).

*Tropidonotus tessellatus*, part., *Wagl. Syst. Amph.* p. 179 (1830).

*Coluber ponticus*, *Pall. Zoogr. Ross.-As.* iii. p. 38.

*Tropidonotus hydrus*, *Eichw. Zool. Spec.* iii. p. 172 (1831); *Nordm. in Demid. Voy. Russ. Mém.* iii. p. 349, *Rept.* pl. x. (1840); *Eichw. Faun. Casp.-Cauc.* p. 110, pl. xxiv. (1841); *Dum. & Bibr.* vii. p. 564 (1854); *Günth. Cat.* p. 63 (1858); *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 220; *Anders. Proc. Zool. Soc.* 1872, p. 394; *Strauch, Schl. Russ. R.* p. 159 (1873); *Blanf. Zool. E. Pers.* p. 419 (1876), and

- 2nd Yark. Miss., Rept. p. 23 (1878); *W. L. Sclater, Journ. As. Soc. Beng.* lx. 1891, p. 240.
- Tropidonotus tantalus*, *Eichw. l. c.* p. 173.
- *gracilis*, *Eichw. l. c.*
- Coluber reticulatus*, *Méntr. Cat. Rais.* p. 71 (1832).
- Natrix gabina*, *Bonap. Faun. Ital.* (1832).
- *tessellata*, *Bonap. l. c.* (1834).
- Tropidonotus viperinus*, part., *Schleg. Phys. Serp.* ii. p. 325, pl. xii. figs. 14 & 15 (1837); *Dum. & Bibr.* vii. p. 560 (1854).
- Coluber (Tropidonotus) elaphoides*, *Brandt, Bull. Ac. St. Pétersb.* iii. 1838, p. 242.
- Tropidonotus scutatus (non Pall.)*, *Eichw. Faun. Casp.-Cauc.* p. 108, pl. xxiii.
- *tessellatus*, *Berthold, in Wagn. Reise n. Kolchis*, p. 335 (1850); *Jan, Arch. f. Nat.* 1859, p. 274; *Jeitteles, Verh. zool.-bot. Ges. Wien*, xii. 1862, p. 283; *Peters, Mon. Berl. Ac.* 1863, p. 534; *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 219; *Noll, Zool. Gart.* 1869, p. 299; *Fatio, Vert. Suisse*, iii. p. 165, pl. i. (1872); *Steind. Verh. zool.-bot. Ges. Wien*, xxiv. 1874, p. 479; *De Betta, Faun. Ital., Rett. Anf.* p. 47 (1874); *Schreib. Herp. Eur.* p. 231 (1875); *Boetty. Ber. Senck. Ges.* 1879-80, p. 160; *Bedriaga, Bull. Soc. Nat. Mosc.* 1881, p. 290; *Leydig, Abh. Senck. Ges.* xiii. 1883, p. 174; *Boetty. in Radde, Faun. Casp.-Geb.* p. 71 (1886); *Noll, Zool. Gart.* 1888, p. 242; *Boetty. Zool. Jahrb.* iii. 1888, p. 934; *Camerano, Mon. Ofid. Ital., Colubr.* p. 23 (1891); *Méhely, Beitr. Mon. Kronstadt, Herp.* p. 35 (1892).
- *angusticeps*, part., *Blyth, Journ. As. Soc. Beng.* xxiii. 1855, p. 295.
- *tessellatus*, var. *flavescens*, *Werner, Verh. zool.-bot. Ges. Wien*, xli. 1891, p. 766.

Eye rather small. Rostral broader than deep, visible from above; nasal usually semidivided; internasals usually as long as broad or longer, subtriangular, truncate in front, as long or nearly as long as the præfrontals; frontal once and a half to twice as long as broad, as long as or a little shorter than its distance from the end of the snout, shorter than the parietals; loreals as deep as long or longer; two (rarely one or three) præoculars, with or without a small subocular below; three postoculars, often with one or two suboculars below; temporals 1+2; eight (rarely seven) upper labials; fourth (third) or fourth and fifth entering the eye; five (rarely four) lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales strongly keeled, of outer row smooth or feebly keeled, in 19 rows. Ventrals 160-197; anal divided; subcaudals 48-86. Olive or olive-grey above, uniform or with dark spots usually arranged quincuncially; a more or less distinct A-shaped dark band on the nape; upper labials yellowish, with dark sutures; lower parts yellow or red, marbled or checkered with black, or nearly entirely black.

Total length 1058 millim.; tail 200.

Italy, Switzerland south of the Alps, Middle Rhine and Moselle Valleys, Bohemia, and the whole of South-eastern Europe; South-western and Central Asia.

## A. Fourth and fifth labials entering the eye.

a. Hgr. ♀ (V. 172; C. 56).	Ivrea, Aoste Valley, Italy.	Count M. G. Peracca [P.].
b. ♂ (V. 166; C. 68).	Galilee.	Canon Tristram [C.].
c-f. ♂ (V. 167, 170; C. ?, 63) & yg. (V. 167, 169; C. 54, 62).	Lake Phiala, under Mt. Hermon.	Canon Tristram [C.].
g-i. ♂ (V. 168; C. 66) & ♀ (V. 163, 169; C. 48, 50).	Merom.	Canon Tristram [C.].
k. ♀ (V. 163; C. 51).	Jerusalem.	Canon Tristram [C.].
l-m. ♂ (V. 171, 177); C. 70, 69).	Mesopotamia.	Commander Jones.

## B. Fourth (exceptionally third) labial entering the eye.

n. ♀ (V. 166; C. 66).	Lake Trasimene, nr. Perugia, Tuscany.	Count M. G. Peracca [P.].
o. ♀ (V. 172; C. ?).	Italy.	Prof. Bianconi [P.].
p. ♀ (V. 166; C. 64).	Baden, near Vienna.	Dr. F. Werner [P.].
q. ♀ (V. 167; C. 62).	Hungary.	Lord Arthur Russell [P.].
r. ♀ (V. 173; C. 54).	Odessa.	
s. Hgr. ♀ (V. 176; C. 61).	Elizabethpol.	St. Petersburg Mus. [E.].
t. ♂ (V. 187; C. 77).	Anan, Mazandaran, North of Teheran.	W. T. Blanford, Esq. [E.].
u. ♂ (V. 170; C. 77).	Enzeli, on the Cas- pian Sea, N. Persia.	W. T. Blanford, Esq. [E.].
v. ♂ (V. 176; C. 64).	Persia.	
w-x, y-z. ♂ (V. 166; C. 71), ♀ (V. 168; C. 60), & yg. (V. 162, 159; C. 69, 59).	Fao, South of Bu- shire, Persian Gulf.	W. D. Cumming, Esq. [P.].
a-δ. ♂ (V. 178, 170; C. 69, 69), ♀ (V. 163; C. 62), & yg. (V. 185; C. 79).	Mesopotamia.	Commander Jones.
ε-ζ. ♂ (V. 178; C. 62) & yg. (V. 168; C. 61).	Euphrates Expedi- tion.	
η. ♂ (V. 182; C. 68).	Kuldja.	Rev. H. Lansdell [C.].
θ. ♂ (V. 182; C. 72).	Kashgar.	Rev. H. Lansdell [C.].

36. *Tropidonotus viperinus*.

? *Coluber maurus*, Linn. S. N. i. p. 379 (1766); *Daud. Rept.* vii. p. 143 (1803).

*Coluber viperinus*, Latr. *Rept.* iv. p. 49, pl. — (1802); *Daud. Rept.* vii. p. 125 (1803); *Dugès, Ann. Sc. Nat.* (2) iii. 1835, p. 133.

*Natrix chersœoides*, Wagl. in *Spir.*, *Serp. Bras.* p. 29, pl. x. fig. 2 (1824).

— *ocellata*, Wagl. l. c. p. 32, pl. xi. fig. 1.

*Tropidonotus viperinus*, Boie, *Isis*, 1827, p. 534; *Günth. Cat.* p. 62 (1858); *Jan, Arch. f. Nat.* 1859, p. 274; *Strauch, Erp. Alg.* p. 59 (1862); *De Betta, Atti Isl. Ven.* (2) x. 1865, p. 538; *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 221, and *Icon. Gén.* 25, pl. vi. (1867); *Vinud-Grandmarais, Et. Serp. Vend.* p. 15 (1868); *Patio, Vert. Suisse*, iii. p. 157 (1872); *De Betta, Faun. Ital., Rett. Anf.* p. 48 (1874); *Schreib. Herp. Eur.* p. 226 (1875); *Lataste, Herp. Gir.*



- p. 133 (1876); *Boettg. Abh. Senck. Ges.* xiii. 1883, p. 101; *De Betta, Atti Ist. Ven.* (7) i. 1883, p. 934; *Bedriaga, Amph. et Rept. de Portug.* p. 71 (1890); *Camerano, Mon. Ofid. Ital., Colubr.* p. 30 (1891); *Bouleng. Tr. Zool. Soc.* xiii. 1891, p. 149.
- Tropidonotus oppelii*, *Boie, l. c.*
- *tessellatus*, part., *Wagl. Syst. Amph.* p. 179 (1830).
- Natrix viperina*, *Bonap. Faun. Ital.* (1834); *Gené, Mem. Acc. Torin.* (2) i. 1839, p. 269, pls. ii. & iii.
- Coluber viperinus*, var. *aurolineatus*, *Gervais, Ann. Sc. Nat.* (2) vi. 1836, p. 312.
- Tropidonotus viperinus*, part., *Schleg. Phys. Serp.* ii. p. 325 (1837); *Dum. & Bibr.* vii. p. 560 (1854).
- (*Coronella*) *tesselatus*, *Eichw. N. Mém. Soc. Nat. Moscou*, ix. 1851, p. 440.
- *chersoides vel ocellatus*, *Dum. & Bibr. t. c.* p. 562; *Lataste, CR. Soc. Linn. Bord.* 1874, p. clxxiii.

Eye rather small. Rostral broader than deep, visible from above; nasal usually semidivided; internasals as long as broad or longer, subtriangular, truncate in front, as long as the præfrontals; frontal once and a half to twice as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal as deep as long, or a little deeper; one or two præoculars; two postoculars; temporals 1+2 or 1+3; seven upper labials, third and fourth entering the eye; four (rarely five) lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales strongly keeled, of outer row smooth or feebly keeled, in 21 (rarely 23) rows. Ventrals 147–160; anal divided; subcaudals 47–72. Grey, brown, or reddish above, with a black zigzag dorsal band and a lateral series of black ocellar spots with a yellow centre; a more or less distinct oblique dark band on the temple, and another on each side of the nape; labials yellow, with black sutures; belly yellow or red, checkered with black, or entirely black.

Total length 850 millim.; tail 170.

France, Switzerland, Italy, Spain and Portugal, Barbary.

#### A. Typical form.

a-b. ♂ (V. 148; C. 59) & yg. (V. 150; C. 58).	Tanaro Valley, Piedmont.	Count M. G. Peracca [P.].
c-d. Hgr. ♂ (V. 151; C. ?) & ♀ (V. 156; C. 54).	Sardinia.	Count M. G. Peracca [P.].
e. Yg. (V. 148; C. 53).	Albufera de Valencia, Spain.	Lord Lilford [P.].
f. ♂ (V. 151; C. 64).	Seville.	M. V. L. Seoane [P.].
g-i. ♂ (V. 155; C. 56), ♀ (V. 151; C. 47), & yg. (V. 158; C. 58).	Alemtejo, Portugal.	Dr. H. Gadow [C.].
k-l. ♂ (V. 157, 151; C. 61, 61).	Serra de Gerez, S. Portugal.	Dr. H. Gadow [C.].
m-n. Hgr. ♂ (V. 152; C. 62) & hgr. ♀ (V. 154; C. 53).	Tangier.	Mr. Fraser [C.].
o-p. ♀ (V. 154; C. 57) & yg. (V. 157; C. 51).	Tangier.	M. H. Vaucher [C.].

- q. ♀ (Sc. 23; V. 155; C. 53). Hamman R'irha, Dr. J. Anderson [P.].  
Algeria.
- r-s. Yg. (V. 153, 150; C. St. Barbe, Algeria. Dr. R. Blanchard [P.].  
56, 60).
- t. ♀ (V. 153; C. 50). Biskra.
- u. Yg. (V. 152; C. 52). Turgurt, Algerian Dr. R. Blanchard [P.].  
Sahara.
- v-y. ♀ (V. 152, 154; C. 50, Tunis. ✓ Mr. Fraser [C.].  
47), hgr. ♀ (V. 151; C.  
50), & yg. (V. 147; C. 57).
- z. ♀ (Sc. 23; V. 157; C. N. Africa. Zoological Society.  
58).
- a. Skull. Algeria.

B. Two yellow or reddish longitudinal dorsal lines in addition to the usual markings. (*N. ocellata*, Wagl., *C. aurolineatus*, Gerv., *T. oppelii*, Boie, *T. chersoides*, D. & B.)

- a. Hgr. ♂ (V. 149; C. ?). Mountain streams of Col. Irby [P.].  
Algeciras.
- b. ♂ (V. 155; C. 72). Alemtejo, Portugal. Dr. H. Gadow [C.].
- c. ♀ (V. 154; C. 53). Tangier. Mr. Fraser [C.].
- d. Yg. (V. 157; C. 62). St. Barbe, Algeria. Dr. R. Blanchard [P.].
- e. ♀ (V. 153; C. 49). Tunis. Mr. Fraser [C.].
- f. ♂ (V. 154; C. 59). Duirat, Tunisia. Dr. J. Anderson [P.].

### 37. *Tropidonotus validus*.

*Regina valida*, Kennicott, *Proc. Ac. Philad.* 1860, p. 334; *Cope, Bull. U.S. Nat. Mus.* no. 32, p. 74 (1887).

*Tropidonotus celæno*, *Cope, Proc. Ac. Philad.* 1860, p. 341, and 1861, p. 298.

— *tephropleura*, *Cope, ll. cc.*

— *validus*; *Cope, l. c.* p. 342; *Coues, Wheeler's Rep. Surv. W.* 100th *Mer.* v. p. 612, pl. xxi. (1875).

— *quadrserialis*, *Fischer, Verh. nat. Ver. Hamb.* (2) iii. 1879, p. 82, pl. i. fig. 2.

— *leberis*, var. *validus*, *Garm. N. Am. Rept.* p. 28 (1883).

— *sirtalis*, var. *quadrserialis*, *Garm. l. c.* p. 140.

• *Regina quadrserialis*, *Cope, Bull. U.S. Nat. Mus.* no. 32, p. 74 (1887).

*Natrix valida*, *Cope, Proc. U.S. Nat. Mus.* xiv. 1892, p. 670.

Eyes rather small. Rostral broader than deep, visible from above; nasal usually semidivided; internasals much narrowed in front, longer than broad, as long as or a little shorter than the præfrontals; frontal twice as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal as long as deep, or longer; one or two præ- and three (rarely two) postoculars; temporals 1+2 or 1+3; eight upper labials, fourth and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are a little shorter than the posterior. Scales in 19 (rarely 21) rows, outer row faintly keeled. Ventrals 136-147; anal divided; subcaudals 66-83. Groyish or olive-brown above, uniform or with longi-

tudinal series of small blackish spots; lower parts uniform yellowish.

Total length 810 millim.; tail 190.

Mexico; Lower California; Arizona and Utah.

*a-g, h, i.* ♂ (V. 138; C. ?), Presidio, W. Mexico. Mr. A. Forrer [C.].  
 ♀ (V. 144, 143, 141, 142,  
 142, 139; C. 70, 77, 68,  
 69, ? 68), & hgr. (V. 136,  
 143; C. 76, 66).

### 38. *Tropidonotus clarkii*.

*Tropidonotus fasciatus*, part., *Schleg. Phys. Serp.* ii. p. 323 (1837).

*Regina clarkii*, *Baird & Gir. Cat. N. Am. Rept.* p. 48 (1853).

*Tropidonotus fasciatus*, var. iv., *Dum. & Bibr.* vii. p. 573 (1854).

— *medusa*, *Günth. Cat.* p. 78 (1858).

— *clarkii*, *Cope, Proc. Ac. Philad.* 1861, p. 74; *Jan, Arch. Zool.*

*Anat. Phys.* iii. 1865, p. 231, and *Icon. Gén.* 27, pl. vi. fig. 1 (1868);

*A. K. Fisher, Am. Nat.* 1887, p. 672.

— *ornatus*, *Jan, l. c.* p. 218.

— *liberis*, var. *clarkii*, *Garm. N. Am. Rept.* p. 142 (1883).

*Natrix clarkii*, *Cope, Proc. U.S. Nat. Mus.* xiv. 1892, p. 669.

Eye rather small. Rostral broader than deep, visible from above; nasal usually semidivided; internasals much narrowed in front, as long as broad or longer, as long as or a little shorter than the præfrontals; frontal once and two thirds to twice as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal longer than deep; one præ- and two or three postoculars; temporals 1+3; eight upper labials, fourth and fifth entering the eye; five or six lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 21 rows, strongly keeled, outer row distinctly keeled. Ventrals 129-132; anal divided; subcaudals 57-70. Dark brown or blackish olive above, with three yellowish stripes; blackish or reddish brown inferiorly, with a yellow lateral stripe and a median series of yellow triangular spots, which may be confluent into a stripe.

Total length 830 millim.; tail 190.

Florida, Louisiana, Texas.

*a.* ♀ (V. 131; C. 65). Pensacola, Florida. C. Bollman, Esq. [C.].  
*b.* ♀ (V. 131; C. 70). Texas. } (Types of *T. medusa*).  
*c.* Yg. (V. 131; C. ?). N. America.

### 39. *Tropidonotus compressicauda*.

*Nerodia compressicauda*, *Kennicott, Proc. Ac. Philad.* 1860, p. 335.

*Tropidonotus ustus*, *Cope, Proc. Ac. Philad.* 1860, p. 340.

— *compsolemus*, *Cope, l. c.* p. 368.

— *compressicaudus*, *Cope, Proc. Ac. Philad.* 1861, p. 74; *Garm.*

*N. Am. Rept.* p. 27 (1883).

— *compressicaudus walkeri*, *Yarrow, Proc. U.S. Nat. Mus.* vi. 1883, p. 154.

*Natrix usta*, Cope, *Proc. U.S. Nat. Mus.* xi. 1880, p. 392.

— *compressicauda*, Cope, *l. c.*, and xiv, 1892, p. 669.

— *compressicauda bivittata*, Cope, *ll. cc.*

Allied to *T. validus* and *T. clarkii*. Frontal shield broad; loreal longer than deep; one præ- and two or three postoculars; a single anterior temporal; eight upper labials, fourth and fifth entering the eye. Scales in 19 or 21 rows, strongly keeled, outer row feebly keeled. Ventrals 126–137; anal divided; subcaudals 66–81. Tail compressed at the base. Dark greyish brown above, much spotted and dotted with yellowish, or with blackish markings; belly brown or red, with yellow spots, or yellow with two lines of black blotches. Florida.

#### 40. *Tropidonotus septemvittatus*.

*Coluber septemvittatus*, Say, *Journ. Ac. Philad.* iv. 1825, p. 240; *Hartl. Med. Phys. Res.* p. 118 (1835).

*Tropidonotus leberis*, Holbr. *N. Am. Herp.* iv. p. 49, pl. xiii. (1842); *DeKay, N. Y. Faun., Rept.* p. 45, pl. xi. fig. 23 (1842); *Dum. & Bibr.* vii. p. 579 (1854); *Günth. Cat.* p. 78 (1858); *Jan, Arch. Zool. An. Phys.* iii. 1865, p. 229, and *Icon. Gén.* 27, pl. v. fig. 2 (1868); *Garm. N. Am. Rept.* p. 27, pl. ii. fig. 1 (1883).

*Regina leberis*, Baird & Gir. *Cat. N. Am. Rept.* p. 45 (1853); *H. Garm. Bull. Illin. Lab.* iii. 1892, p. 272.

*Natrix leberis*, Cope, *Proc. U.S. Nat. Mus.* xiv. 1892, p. 668.

Head small, scarcely distinct from neck. Eye rather small. Rostral broader than deep, visible from above; nasal semidivided; internasals small, as long as broad, as long as or a little shorter than the prefrontals; frontal hardly once and a half as long as broad, as long as or a little longer than its distance from the end of the snout, shorter than the parietals; loreal as long as deep or a little longer; two præ- and two postoculars; temporals 1 + 2; seven upper labials, third and fourth entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows, all strongly keeled. Ventrals 140–151; anal divided; subcaudals 64–86. Olive-brown above, with or without three darker dorsal stripes; a yellowish lateral streak along the first and second rows of scales; upper lip yellowish; belly yellowish, with four brown stripes, the two median of which may be broken up into spots.

Total length 690 millim.; tail 160.

United States east of the Mississippi and Texas.

- a-b.* Hgr. ♂ (V. 143; C. 77) Bloomington, Indiana. C. Bollman, Esq.  
& ♀ (V. 146; C. 67). [C.]  
*c-g.* ♂ (V. 140, 146, 145; C. N. America.  
79, 73, ?), ♀ (V. 151; C.  
73), & yg. (V. 141; C. 67).



41. *Tropidonotus rigidus*.

- Coluber rigidus*, *Say, Journ. Ac. Philad.* iv. 1825, p. 239; *Harl. Med. Phys. Res.* p. 118 (1835).  
*Tropidonotus rigidus*, *Holbr. N. Am. Herp.* iv. p. 39, pl. x. (1842); *Dum. & Bibr.* vii. p. 577 (1854).  
*Regina rigida*, *Baird & Gir. Cat. N. Am. Rept.* p. 46 (1853).  
*Tropidonotus leberis*, var. *rigidus*, *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 230; *Garm. N. Am. Rept.* p. 28 (1883).  
*Natrix rigida*, *Cope, Proc. U.S. Nat. Mus.* xiv. 1892, p. 668.

Head small, scarcely distinct from neck; snout very short. Eye moderate. Rostral broader than deep, visible from above; nasal semidivided; internasals small, broader than long, shorter than the præfrontals; frontal twice as long as broad, longer than its distance from the end of the snout, shorter than the parietals; loreal nearly as long as deep; two præ- and two postoculars; temporals 1+2; seven upper labials, third and fourth entering the eye; five lower labials in contact with the anterior chin-shields, which are nearly as long as the posterior. Scales in 19 rows, strongly keeled, outer row smooth, second feebly keeled. Ventrals 132-142; anal divided; subcaudals 51-71. Olive-brown above, with or without a pair of blackish dorsal stripes; upper lip and lower parts yellow; two series of black spots along the belly, confluent into one anteriorly; a black line along the middle of the tail.

Total length 510 millim.; tail 120.

United States, east of the Mississippi.

- |                         |                     |                        |
|-------------------------|---------------------|------------------------|
| a. Yg. (V. 141; C. 61). | Pensacola, Florida. | C. Bollman, Esq. [C.]. |
| b. ♂ (V. 142; C. 62).   | N. America.         | Lord Amptill [P.].     |

42. *Tropidonotus grahami*.

- Regina grahamii*, *Baird & Gir. Cat. N. Am. Rept.* p. 47 (1853); *H. Garm. Bull. Illin. Lab.* iii. 1892, p. 273.  
*Tropidonotus grahamii*, part., *Günth. Cat.* p. 78 (1858).  
 — *grahamii*, *Cope, Proc. Ac. Philad.* 1861, p. 297.  
 — *leberis*, var. *grahamii*, *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 229, and *Icon. Gén.* 27, pl. v. fig. 1 (1868); *Garm. N. Am. Rept.* p. 28 (1883).  
*Natrix grahamii*, *Cope, Proc. U.S. Nat. Mus.* xiv. 1892, p. 668.

Head small, not distinct from neck. Eye rather small. Rostral broader than deep, visible from above; nasal semidivided; internasals narrow, longer than broad, as long as the præfrontals or a little shorter; frontal once and two thirds to twice as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal as long as deep or deeper; two præ- and two or three postoculars; temporals 1+2; seven upper labials, third and fourth entering the eye; five lower labials in contact with the anterior chin-shields, which are much shorter than the posterior. Scales in 19 or 21 rows, very strongly keeled, outer row feebly or

faintly keeled. Ventrals 156-173; anal divided; subcaudals 45-65. Olive-brown above, uniform or with a lighter black-edged vertebral stripe; a broad yellowish or pale olive, black-edged stripe along the three outer rows of scales; upper lip and lower parts yellowish, with or without a median black line or series of spots along the belly and tail.

Total length 880 millim.; tail 130.

North America, from Wisconsin and Michigan to Louisiana and Texas; North Mexico.

- a. Yg. (Sc. 19; V. 157; C. 55). New Orleans.  
 b. ♀ (Sc. 21; V. 158; C. 52). N. America.  
 c. ♀ (Sc. 19; V. 163; C. 45). Mexico.  
 d-e. ♀ (Sc. 21; V. 168, 153; C. 53, 63). —?

#### 43. *Tropidonotus ferox*.

*Coluber mortuarius* (*non Daud.*), *Kuhl, Beitr.* p. 96 (1820).

*Tropidonotus mortuarius*, *Schleg. Phys. Serp.* ii. p. 330 (1837); *Cope, Proc. Ac. Philad.* 1863, p. 309.

— *ferox*, *Günth. Ann. & Mag. N. II.* (3) xii. 1863, p. 355, pl. vi. fig. F, and (4) ix. 1872, p. 27; *F. Müll. Verh. nat. Ges. Basel*, vii. 1885, p. 682.

*Helicops mortuarius*, *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 246, and *Icon. Gén.* 28, pl. i. fig. 2 (1868).

Eye rather small. Rostral twice as broad as deep, just visible from above; nasal semidivided; internasals much narrowed in front, with concave outer border, as long as or longer than the præfrontals; frontal once and one third to once and a half as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal as long as deep or deeper; one or two præ- and two postoculars; two to four suboculars, separating the eye from the labials; temporals 1+2; nine upper labials; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales very strongly keeled, in 21 to 27 rows. Ventrals 137-155; anal divided; subcaudals 60-73. Dark olive or reddish brown above, with or without black transverse spots; belly yellowish or bright orange, usually with a lateral series of black spots; the ventral shields may be partly or entirely edged with black.

Total length 750 millim.; tail 175.

West Africa.

#### A. Scales in 21 rows.

- a. ♂ (V. 147; C. 73). Fernando Po. (Type.)

#### B. Scales in 23 rows.

- b. Hgr. ♂ (V. 139; C. 70). Adjah Bippo, Wassau, G. A. Higlett, Esq.  
 Gold Coast. [P.]  
 c-e. ♂ (V. 155; C. 68), Freetown, Sierra Leone. R. Dinzey, Esq. [C.]  
 ♀ (V. 161; C. 65), &  
 yg. (V. 150; C. 66).

## C. Scales in 25 rows.

*f-g.* ♀ (V. 149, 146; Freetown, Sierra Leone. R. Dinzey, Esq. [C.].  
C. 60, 64).

## D. Scales in 27 rows.

*h.* ♀ (V. 152; C.?). Freetown, Sierra Leone. R. Dinzey, Esq. [C.].

44. *Tropidonotus anoscopus*.

*Tropidonotus anoscopus*, Cope, *Proc. Ac. Philad.* 1861, p. 299.

*Natrix anoscopus*, Cope, *Proc. U.S. Nat. Mus.* xiv. 1892, p. 673.

Snout short, obtuse. Rostral shield twice as broad as deep; internasals small, very narrow anteriorly; frontal elongate; loreal deeper than long; one præ- and two postoculars; a single anterior temporal; eye separated from the labials by a series of small suboculars; nine upper labials. Scales in 23 rows, all keeled except those of the first row. Ventrals 143; anal divided; subcaudals 73. Dark plumbeous brown above, with blackish vertical bars, alternate upon each side; beneath dirty brownish white, each shield brown at the base.

Total length 355 millim.; tail 90.

Cuba.

45. *Tropidonotus fasciatus*.

*Coluber fasciatus*, Linn. *S. N.* i. p. 378 (1766); *Catesby, Nat. Hist. Carol.* ii. pl. lviii. (1771); *Daud. Rept.* vii. p. 184 (1803); *Harl. Med. Phys. Res.* p. 120 (1835).

— sipedon, Linn. *t. c.* p. 379; *Daud. t. c.* p. 148; *Harl. l. c.* p. 114; *Storer, Rep. Fish. & Rept. Mass.* p. 228 (1839).

— erythrogaster, *Catesby, t. c.* pl. xlvi.

— porcatus, *Latr. Rept.* iv. p. 82, pl. — (1802); *Daud. t. c.* p. 204; *Harl. l. c.* p. 119.

*Tropidonotus fasciatus*, Boie, *Isis*, 1827, p. 535; *Holbr. N. Am. Herp.* iv. p. 25, pl. v. (1842); *Dum. & Bibr.* vii. p. 566 (1854); *Günth. Cat.* p. 76 (1858); *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 221, and *Icon. Gén.* 26, pl. iii. (1868).

— porcatus, Boie, *l. c.*

*Coluber cauda-schistosus*, *Harl. l. c.* p. 124.

*Tropidonotus fasciatus*, part., *Schleg. Phys. Serp.* ii. p. 323 (1837).

*Coluber pœcilogaster*, *Wied, Reise N. Am.* i. p. 106 (1839).

*Tropidonotus sipedon*, *Holbr. l. c.* p. 29, pl. vi.; *Dekay, N. York Faun., Rept.* p. 42, pl. xiv. fig. 31 (1842); *Garm. N. Am. Rept.* p. 25, pl. ii. fig. 3 (1883).

— erythrogaster, *Holbr. l. c.* p. 33, pl. vii.

— niger, *Holbr. l. c.* p. 37, pl. ix.

— rhombifer, *Hallow. Proc. Ac. Philad.* 1852, p. 177; *Cope, Proc. Ac. Philad.* 1861, p. 298; *Jan, U. cc.* p. 222, pl. iv. fig. 2.

— transversus, *Hallow. l. c.*; *Garm. Bull, Essex Inst.* xxiv. 1892, p. 103.

*Nerodia sipedon*, *Baird & Gir. Cat. N. Am. Rept.* p. 33 (1853); *H. Garm. Bull. Ulin. Lab.* iii. 1892, p. 269.

— fasciata, *Baird & Gir. l. c.* p. 39.

- Nerodia erythrogaster*, Baird & Gir. l. c. p. 40.  
 — *agassizii*, Baird & Gir. l. c. p. 41.  
 — *woodhousii*, Baird & Gir. l. c. p. 42.  
 — *holbrookii*, Baird & Gir. l. c. p. 43.  
 — *niger*, Baird & Gir. l. c. p. 147.  
 — *rhombifer*, Baird & Gir. l. c. p. 147.  
 — *transversa*, Baird & Gir. l. c. p. 148.  
*Tropidonotus pogonias*, Dum. & Bibr. vii. p. 574.  
 — *obliquus*, Hallow. Proc. Ac. Philad. 1856, p. 248; Garm. Bull. Essex Inst. xxiv. 1892, p. 103.  
 — *cyclopion*, part., Günth. Cat. p. 248.  
*Nerodia couchii*, Kennicott, Proc. Ac. Philad. 1860, p. 335.  
*Tropidonotus couchii*, Cope, Proc. Ac. Philad. 1860, p. 342.  
 — *woodhousii*, Cope, l. c.; Jan, ll. cc. p. 222, pl. iv. fig. 1.  
 — *bisectus*, Cope, Proc. U.S. Nat. Mus. x. 1887, p. 146.  
*Natrix fasciata*, Cope, Proc. U.S. Nat. Mus. xi. 1888, p. 392, and xiv. 1892, p. 670.  
 — *bisecta*, Cope, Proc. U.S. Nat. Mus. xiv. 1892, p. 670.  
 — *fasciata pleuralis*, Cope, l. c. p. 672.  
 — *rhombifera*, Cope, l. c. p. 673.

Eye rather small. Rostral broader than deep, visible from above; internasals much narrowed in front, as long as broad or a little longer, as long as or shorter than the prefrontals; frontal once and two thirds to twice as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal as long as deep or deeper; one (rarely two) præ- and three (rarely two) post-oculars; temporals 1+2 or 1+3; eight upper labials, fourth or fourth and fifth entering the eye; five (rarely four) lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 23 to 27 rows, strongly keeled, of outer row more or less distinctly keeled. Ventrals 128-154; anal divided; subcaudals 58-82.

Total length 1100 millim; tail 240.

North America east of the Rocky Mountains; Central America.

A. (Forma *typica*.) Brown above, with a dorsal row of large transverse blackish spots and an alternating series of smaller spots on each side, or with dark brown cross bands; belly spotted with black or brown. Scales in 23 or 25 rows.

- |  |                       |                                     |
|--|-----------------------|-------------------------------------|
| a. ♂ (Sc. 23; V. 143; C. 75).                                    | Canada.               | J. Cruickshanks, Esq. [C].          |
| b. ♀ (Sc. 23; V. 146; C. 65).                                    | Canada.               | Officers of the Chatham Museum [P]. |
| c-d. Yg. (Sc. 25; V. 136, 135; C. 76, 60).                       | Bloomington, Indiana. | C. Bollman, Esq. [C].               |
| e. Hgr. (Sc. 25; V. 130; C. ?).                                  | Florida.              | Smithsonian Institution [P].        |
| f-g. Hgr. (Sc. 23; V. 137; C. 72) & yg. (Sc. 23; V. 130; C. 77). | New Orleans.          |                                     |
| h-i. Yg. (Sc. 25, 23; V. 149, 149; C. 75, 80).                   | New Orleans.          | M. Sallé [C].                       |



- k-n.* ♂ (Sc. 23; V. 139; C. ?), Cartago, Costa  
 ♀ (Sc. 23; V. 134; C. ?), Rica.  
 & hgr. (Sc. 23, 25; V. 142,  
 139; C. ?, 63).  
*o, p, q.* Skulls. United States.
- B. (Var. *sipedon.*) The dorsal spots as in the preceding but much paler, the interspaces between them appearing as narrow transverse light bands margined with black; belly with pale brown blotches. Scales in 23 rows.
- a.* ♀ (Sc. 23; V. 139; C. 68). Pennsylvania. Smithsonian Institution [P].  
*b.* ♂ (Sc. 23; V. 138; C. 75). N. America. Lord Amphyll [P].
- C. (Var. *erythrogaster.*) Brick-red or dark brown above, uniform red or copper colour beneath. Scales in 23 or 25 rows.
- a.* ♀ (Sc. 25; V. 152; C. 64). Illinois. Smithsonian Institution [P].
- D. (Var. *rhubifer.*) Pale brown above, with three alternating series of transverse dark brown spots, the median not larger than the lateral; these spots may be connected by dark brown meshes; belly with brown spots. Scales in 25 or 27 rows.
- a.* ♂ (Sc. 26; V. 144; C. 77). New Orleans. M. Sallé [C].  
*b.* Yg. (Sc. 27; V. 140; C. 76). New Orleans.  
*c.* Yg. (Sc. 27; V. 136; C. 58). Louisiana.  
*d.* Yg. (Sc. 25; V. 138; C. 66). Mexico.
- E. Like the preceding, but spots paler and smaller; belly immaculate.
- a-f, g, h-k.* ♂ (Sc. 25; V. 143; Mexico.  
 C. 81), ♀ (Sc. 25, 25, 25,  
 25, 25, 27; V. 141, 143,  
 139, 140, 141, 142; C. 66,  
 69, 67, 71, 68, 67), & yg.  
 (Sc. 25, 27, 25; V. 138,  
 137, 147; C. 71, ? 82).
- l.* ♂ (Sc. 25; V. 143; C. ?). Tampico, Mexico. Mr. Richardson [C].  
 F. D. Godman, Esq.  
 [P].

#### 46. *Tropidonotus cyclopium.*

*Tropidonotus cyclopium*, *Dum. & Bibr.* vii. p. 576 (1854); *Günth. Cat.* p. 77 (1858); *Cope, Proc. Ac. Philad.* 1861, p. 299; *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 223, and *Icon. Gén.* 26, pl. v. figs. 2 & 3, and pl. vi. (1868); *Garm. N. Am. Rept.* p. 26, pl. ii. fig. 4 (1883).

— *cyclopium*, part., *Günth. Cat.* p. 248.

*Natrix cyclopium*, *Cope, Proc. U.S. Nat. Mus.* xiv. 1892, p. 673.

*Nerodia cyclopium*, *H. Garm. Bull. Illin. Lab.* iii. 1892, p. 271.

Closely allied to *T. fasciatus*, but eye separated from the labials by two or three suboculars, and scales in 29 to 31 rows. Ventrals 132-150; anal divided; subcaudals 60-79. Dark olive above, with

five longitudinal alternating series of blackish spots; lower parts dark brown spotted with yellow, or yellow spotted with brown.

Total length 930 millim.; tail 220.

United States east of the Mississippi, as far north as Ohio.

- a. ♀ (Sc. 29; V. 138; C. 64). New Orleans.  
 b. Yg. (Sc. 29; V. 132; C. 79). Lake Kerr, Florida. A. Erwin Brown, Esq. [P.].  
 c. Yg. (Sc. 31; V. 136; C. 73). Florida. Smithsonian Institution [P.].  
 d. ♀ (Sc. 29; V. 137; C. 69). United States.

#### 47. *Tropidonotus taxispilotus*.

*Tropidonotus taxispilotus*, *Holbr. N. Am. Herp.* iv. p. 35, pl. viii. (1842); *Dum. & Bibr.* vii. p. 605 (1854); *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 222, and *Icon. Gén.* 26, pl. v. fig. 1 (1868); *Garm. N. Am. Rept.* p. 26 (1883).

*Nerodia taxispilota*, *Baird & Gir. Cat. N. Am. Rept.* p. 43 (1853).

*Tropidonotus taxispilotus*, var. *brocki*, *Heilprin, Explor. Florida*, p. 129, pl. xvii. (1887).

*Natrix taxispilota*, *Cope, Proc. U.S. Nat. Mus.* xi. 1889, p. 392.

Head small; eye rather small. Rostral broader than deep, visible from above; internasals narrow, as long as or a little shorter than the præfrontals; frontal once and a half to once and three fourths as long as broad, nearly as long as its distance from the end of the snout; parietals very short, broken up into scales posteriorly; loreal longer than deep; one præ- and two postoculars; temporals 2+4 or 5 (or 1+3); eight upper labials, fourth entering the eye; five or six lower labials in contact with the anterior chin-shields, which are nearly as long as the posterior. Scales in 29 to 33 rows, strongly keeled, outer row more or less distinctly keeled. Ventrals 130-144; anal divided; subcaudals 70-83. Brown above, with three alternating series of large quadrangular dark brown spots; lower parts whitish, spotted or marbled with brown, the brown colour usually predominating.

Total length 1310 millim.; tail 300.

Eastern United States from New York to Florida.

- a-b. ♀ (Sc. 31; V. 139; C. 73), N. America. Lord Amphill [P.].  
 & yg. (Sc. 31; V. 139; C. 83).  
 c-d. ♀ (Sc. 31, 31; V. 136, 136; Savannah, Paris Museum [P.].  
 C. 70, ?). Georgia.

III. AMPHIESMA.—Maxillary teeth not more than 30, last two or three abruptly enlarged.

Fig. 15.



Maxillary of *Tropidonotus tigrinus*.

48. *Tropidonotus sexlineatus*.

*Dromicus sexlineatus*, *Günth. Ann. & Mag. N. II.* (5) ix. 1882, p. 264, fig.

— *macrocerus*, *Günth. l. c.* p. 265.

*Leptophis varius*, *Fischer, Jahrb. Hamb. naturw. Anst.* i. 1884, p. 36, pl. iii. fig. 8.

Eye rather small. Rostral nearly as deep as broad, visible from above; internasals broader than long, as long as or a little shorter than the præfrontals; frontal once and two thirds to once and three fourths as long as broad, longer than its distance from the end of the snout, shorter than the parietals; loreal as long as deep or deeper than long; one (rarely two) præ- and two postoculars; temporals 1 + 2; eight upper labials, fourth and fifth entering the eye; four lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales smooth, in 17 rows. Ventrals 143–157; anal divided; subcaudals 72 (♀) to 152 (♂). Tail of male nearly half the total length, of female two sevenths. Olive-brown above, darker on the vertebral region; a dark brown or black lateral band from the end of the snout, through the eye, to the angle of the mouth; two other more or less distinct lateral streaks, on each side, one above and one below, the latter bordering the ventrals; upper lip yellowish; lower parts yellowish, uniform or black-spotted.

Total length 1060 millim.

Madagascar.

a-c. ♀ (V. 146, 147, 145; C. 73, 76, 78).	E. Betsileo.	Rev. W. D. Cowan [C.] (Types.)
d-f. ♂ (V. 152, 157, 154; C. 152, 150, ?).	E. Betsileo.	Rev. W. D. Cowan [C.] (Types of <i>D. macrocerus</i> .)
g. ♀ (V. 146; C. 77).	Betsileo.	Rev. G. Shaw [C.]
h. ♀ (V. 145; C. 72).	Madagascar.	Rev. R. Baron [C.]
i. ♂ (V. 157; C. 110).	Madagascar.	
k, l. ♂ (V. 162; C. ?)	East Imerina.	Rev. R. Baron [C.]
& ♀ (V. 143; C. 72).		

49. *Tropidonotus dolichocercus*.

*Dromicus dolichocercus*, *Peracca, Bull. Mus. Torin.* vii. 1892, no. 112, pl. i. fig. 1.

Eye rather large. Rostral much broader than deep, just visible from above; internasals shorter than the præfrontals; frontal once and a half as long as broad, longer than its distance from the end of the snout, a little shorter than the parietals; loreal as deep as long or deeper than long; one præocular; two or three postoculars; temporals 1 + 2; eight upper labials, fourth and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are nearly as long as the posterior. Scales smooth, in 17 rows. Ventrals 148–156; anal divided; subcaudals 97 (♀)

to 160 (♂). Tail of female one third total length, of male two fifths. Back blackish or dark grey, with scalloped edges; a short yellowish streak may be present on the middle of the nape; upper lip yellow, edged with black above; one or two more or less distinct black streaks along each side of the body and tail; belly black, separated from the lateral streak by a yellowish interspace or streak; lower surface of tail black in the type specimen, yellow in the specimen in the Collection.

Total length 630 millim.; tail 210.

Madagascar.

a. ♀ (V. 148; C. 97). East Imerina. Rev. R. Baron [C.].

### 50. *Tropidonotus stumpffii*.

*Leptophis lateralis*, part., *Dum. & Bibr.* vii. p. 544 (1854).

*Thamnosophis lateralis*, *Jan, Icon. Gén.* 49, pl. ii. fig. 2 (1879).

*Dromicus stumpffii*, *Boettg. Zool. Anz.* 1881, p. 358, and *Abh. Senck. Ges.* xii. 1881, p. 441, pl. i. fig. 2.

*Ptyas infrasignatus*, *Günth. Ann. & Mag. N. H.* (5) ix. 1882, p. 263, fig., and (6) v. 1890, p. 70.

*Dromicus baroni*, *Bouleng. Ann. & Mag. N. H.* (6) i. 1888, p. 104, pl. v. fig. 5.

Eye large. Rostral broader than deep, just visible from above; internasals shorter than the præfrontals; frontal once and a half as long as broad, as long as or a little longer than its distance from the end of the snout, a little shorter than the parietals; loreal as deep as long or a little deeper than long; one præocular (nearly divided) not touching the frontal; two postoculars; temporals 2+2; eight upper labials, fourth and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are much shorter than the posterior. Scales smooth, in 19 rows. Ventrals 147-169; anal divided; subcaudals 68-104. Olive or dark brown above, some of the scales with dark and light edges; usually two more or less distinct light streaks along the anterior portion of the body; upper lip yellowish; a black streak from the eye to the angle of the mouth; lower parts yellowish, uniform or with black spots, which may be confluent into three longitudinal streaks.

Total length 940 millim.; tail 210.

Madagascar.

- a. Yg. (V. 150; C. 96). Nossi Bé. Senckenberg Mus. [E.].  
(As typical of *D. stumpffii*.)
- b-d. ♀ (V. 157, 155, Ankafana, Betsileo. Rev. W. D. Cowan  
158; C. 2, 71, 68). [C.]. (Types of *P.*  
*infrasignatus*.)
- e. ♀ (V. 151; C. 70). Madagascar. Rev. R. Baron [C.].  
(Type of *D. baroni*.)
- f-g. Hgr. ♂ (V. 167, Tamatave. M. Majastro [C.].  
169; C. 104, 100).



- |  |                                  |                     |
|--|----------------------------------|---------------------|
| <i>h-i.</i> Hgr. ♂ (V. 168;<br>C. 96) & ♀ (V. 160;<br>C. 91).    | Sahambendrana,<br>C. Madagascar. | M. Majastre [C.].   |
| <i>k-m.</i> ♂ (V. 147, 148;<br>C. 75, 73) & ♀<br>(V. 151; C. ?). | Imerina.                         | Rev. R. Baron [C.]. |

51. *Tropidonotus lateralis*.

- Leptophis lateralis*, part., *Dum. & Bibr.* vii. p. 544 (1854).  
*Dromicus melanotus*, var. ?, *Günth. Cat.* p. 133 (1858).  
*Thamnosophis lateralis*, part., *Jan, Elenco*, p. 82 (1863).  
*Dromicus madagascariensis*, *Günth. Ann. & Mag. N. H.* (4) ix. 1872,  
 p. 22.  
*Ahætulla lateralis*, *Boettg. Abh. Senck. Ges.* xi. 1877, p. 33.  
*Philothamnus lateralis*, *Boettg. Abh. Senck. Ges.* xii. 1881, p. 526. ]

Closely allied to the preceding, but eye not quite so large and frontal longer, once and two thirds to twice as long as broad; temporals 2+2, rarely 1+2. Dark brown or blackish above, with a white lateral stripe extending to the end of the tail; upper lip and lower parts white, with a black dot at the outer end of each ventral shield; belly rarely speckled with black.

Total length 570 millim.; tail 165.

Madagascar.

- |   |               |   |
|---|---------------|---|
| <i>a, b.</i> ♂ (V. 158; C. 93) & ♀<br>(V. 168; C. ?). | Madagascar.   | (Types of <i>D. mada-</i><br><i>gascariensis</i> .) |
| <i>c, d.</i> ♂ (V. 165; C. ?) & ♀<br>(V. 151; C. 78). | Madagascar.   | Rev. R. Baron [C.].                                 |
| <i>e-f.</i> ♂ (V. 156; C. ?) & ♀<br>(V. 162; C. ?).   | East Imerina. | Rev. R. Baron [C.].                                 |
| <i>g.</i> ♂ (V. 149; C. 91).                          | — ?           | Zoological Society.                                 |

52. *Tropidonotus platyceps*.

*Tropidonotus platyceps*, *Blyth, Journ. As. Soc. Beng.* xxiii. 1854,  
 p. 297; *Günth. Proc. Zool. Soc.* 1860, p. 162, and *Rept. Brit. Ind.*  
 p. 264, pl. xxii. fig. D (1864); *Stoliczka, Journ. As. Soc. Beng.*  
 xxxix. 1870, p. 191; *Anders. Proc. Zool. Soc.* 1871, p. 176; *Theob.*  
*Cat. Rept. Brit. Ind.* p. 174 (1876); *Bouleng. Favn. Ind., Rept.*  
 p. 343 (1890).

*Herpetoreas sieboldii*, *Günth. ll. cc.* pp. 156, 257; *Theob. Cat. Rept.*  
*As. Soc. Mus.* p. 54 (1868), and *Cat. Rept. Brit. Ind.* p. 172 (1876).

*Zamenis himalayanus*, *Steind. Sitzb. zool.-bot. Ges. Wien*, xvii. 1867,  
 p. 513, pl. xiii. fig. 1.

Eye moderate. Rostral broader than deep, just visible from above; internasals as long as broad or a little broader, shorter than the præfrontals; frontal once and a half to twice as long as broad, longer than its distance from the end of the snout, shorter than the parietals; loreal longer than deep; one præocular (sometimes divided); two or three postoculars; temporals 1+1, or 1+2, or 2+2; eight upper labials, third, fourth, and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are much shorter than the posterior. Scales in 19 rows,

faintly or feebly keeled. 177-235 ventrals; anal divided; subcaudals 75-107. Olive-brown above, with small black spots; frequently two black parallel lines or an elliptic marking on the nape; a light, black-edged streak on each side of the head, or a black line from eye to gape; belly yellowish, with or without blackish dots; frequently a black line or series of elongate blackish spots along each side of the belly; lower surface of tail frequently mottled with blackish; throat sometimes black.

Total length 900 millim.; tail 230.

Himalayas and Khasi Hills.

- a-d.* ♂ (V. 232; C. 92) Cashmere, 10,000 feet. T. C. Jerdon, Esq. [C.]  
& ♀ (V. 217, 212, 204;  
C. 88, 75, 86).
- e-f.* ♂ (V. 206, 202; Nepal. B. H. Hodgson, Esq.  
C. 102, 100). [P.]
- g.* ♂ (V. 206; C. 90). Sikkim. Messrs. v. Schlagintweit [C.] (Type of *H. sieboldii*.)
- h-i.* ♂ (V. 214, 177; Sikkim. Messrs. v. Schlagintweit [C.]
- k-l.* ♂ (V. 202; C. 95) Sikkim. Sir J. Hooker [P.]  
& ♀ (V. 184; C. 98).
- m-n.* ♂ (V. 196, 193; Darjeeling. T. C. Jerdon, Esq. [P.]  
C. 107, ?).

### 53. *Tropidonotus tigrinus*.

*Tropidonotus tigrinus*, *Boie, Isis*, 1826, p. 205; *Schleg. Phys. Serp.* ii. p. 315 (1837), and *Faun. Japon., Rept.* p. 85, pl. iv. (1838); *Günth. Cat.* p. 71 (1858), and *Rept. Brit. Ind.* p. 271 (1864); *Strauch, Schl. Russ. R.* p. 176 (1873).

*Amphisma tigrinum*, *Dum. & Bibr.* vii. p. 732 (1854); *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 233, and *Icon. Gén.* 29, pl. i. fig. 2 (1868).

*Tropidonotus lateralis*, *Berthold, Götting. Nachr.* 1859, p. 180; *Jan, ll. cc.* p. 220, *Icon.* 25, pl. v. fig. 1 (1867).

— *orientalis*, *Günth. Proc. Zool. Soc.* 1861, p. 391, and *Ann. & Mag. N. H.* (3) ix. 1862, p. 59, pl. ix. fig. 3; *Strauch, Voy. Przewalski, Rept.* p. 48 (1876).

Eye large. Rostral broader than deep, just visible from above; internasals as long as broad, as long as or a little longer than the præfrontals; frontal once and one third to once and a half as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal as long as deep or deeper; two præ- and three or four postoculars; temporals 1+2 (rarely 2+2); seven upper labials, third and fourth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales strongly keeled, of outer row smooth or keeled, in 19 rows. Ventrals 147-166; anal divided; subcaudals 55-84. Olive above, with more or less distinct black cross bands or large alternating spots; a series of light spots may be present on each side of the back; a series of black and red spots on each side of the neck; upper lip yellowish, the sutures between the shields

black; a black spot or oblique streak below the eye, and a triangular black blotch or oblique band on the temple, descending to the angle of the mouth; a more or less distinct black nuchal collar; lower parts yellowish or pale olive anteriorly, usually with a lateral series of black spots, olive-grey posteriorly spotted with black, or nearly entirely black.

Total length 890 millim.; tail 200.

Mantchuria, China, Japan, Cochin China, Siam.

- a-e.* ♂ (V. 162, 159, 158; Japan.  
C. 78, ♀, 84) & ♀ (V. 163,  
164; C. 74, 71).
- f-h.* ♂ (V. 160; C. 76) & ♀ Kobe, Japan. H.M.S. 'Challenger.'  
(V. 163, 166; C. 80, 72).
- i.* ♂ (V. 159; C. 63). Gensan, Corea. J. H. Leech, Esq. [P].
- k, l.* ♂ (V. 153; C. 63) & Peking. R. Swinhoe, Esq. [C].  
yg. (V. 164; C. 60). (Types of *T. orientalis*.)
- m-p.* ♂ (V. 150, 161, 154; Chefoo. R. Swinhoe, Esq. [C].  
C. 64, 57, 65) & ♀ (V.  
157, C. ♀).
- q.* ♀ (V. 160; C. 55). Ningpo.
- r.* ♀ (V. 152; C. ♀). Mountains north A. E. Pratt, Esq. [C].  
of Kiu Kiang.
- s.* ♀ (V. 160; C. 56). Hoi-How, Hainan. J. Neumann, Esq. [P].

#### 54. *Tropidonotus pryeri*.

*Tropidonotus pryeri*, *Bouleng. Proc. Zool. Soc.* 1887, p. 149, pl. xviii. fig. 3.

Form slender. Eye rather large. Rostral broader than long, scarcely visible from above; internasals as broad as long, trapezoid, as long as the præfrontals; frontal one and two thirds as long as broad, as long as its distance from the end of the snout, a little shorter than the parietals; loreal a little longer than deep; one præ- and three postoculars; temporals 2+2 (rarely 1+2); eight upper labials, fourth and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows, all strongly keeled. Ventrals 171-181; anal divided; subcaudals 114-128. Anterior part of body with large alternating black elongate spots, separated by a narrow stripe of pale olive on the vertebral line, by broader yellowish vertical bars on the sides; head dark olive, above spotted or marbled with black; upper lip yellowish, the sutures between the anterior upper labials black; an oblique black streak across the seventh upper labial; a yellow spot, surrounded with black, at the extremity of the jaws; hinder part of body with a series of black dorsal spots and a lateral series of light spots; lower parts yellowish, the hinder part of the body with a series of black streaks along each side of the ventrals, becoming confluent into a lateral black line on the subcaudals.

Total length 930 millim.; tail 300.

Loo Choo Islands.





56. *Tropidonotus ceylonensis*.

*Tropidonotus chrysargus*, var. *ceylonensis*, *Günth. Cat. Col. Sn.* p. 71 (1858).

— *ceylonensis*, *Günth. Rept. Brit. Ind.* p. 268, pl. xxii. fig. G (1864); *Bouleng. Faun. Ind., Rept.* p. 346 (1890).

Eye rather large. Rostral twice as broad as deep, just visible from above; internasals as long as broad or a little longer, broadly truncate in front, shorter than the præfrontals; frontal once and a half to once and two thirds as long as broad, longer than its distance from the end of the snout, as long as the parietals; loreal as deep as long; two præoculars; three postoculars; temporals 2+2 or 2+3; eight upper labials normally, fourth and fifth entering the eye; four lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows, strongly keeled, the outer row smooth or faintly keeled. Ventrals 133–141; anal divided; subcaudals 48–54. Olive-brown above, with black cross bands and a series of large yellow black-edged ocelli along each side of the back; these markings less distinct in the adult; lips white; a black band on each side of the head behind the eye; a black band on each side of the nape, converging towards its fellow posteriorly, the space between them yellow in the young; belly uniform yellowish, or powdered with brown posteriorly.

Total length 460 millim.; tail 85.

Ceylon.

- |                            |            |                                  |
|----------------------------|------------|----------------------------------|
| a. Hgr. ♂ (V. 133; C. 54). | Ceylon.    | (Type.)                          |
| b. ♂ (V. 134; C. 51).      | Ceylon.    | Col. Beddome [C.].               |
| c. Yg. (V. 133; C. 52).    | Ceylon.    | G. H. K. Thwaites, Esq.<br>[P.]. |
| d. Yg. (V. 133; C. 50).    | Ceylon.    |                                  |
| e. ♀ (V. 141; C. 48).      | S. Ceylon. |                                  |

57. *Tropidonotus beddomii*.

*Spilotes vittatus*, *Beddome, Madras Journ. Med. Sc.* 1863.

*Tropidonotus beddomii*, *Günth. Rept. Brit. Ind.* p. 269, pl. xxii. fig. E (1864); *Bouleng. Faun. Ind., Rept.* p. 344 (1890).

Eye moderate. Rostral twice as broad as deep, just visible from above; internasals as broad as long or a little longer, broadly truncate anteriorly, as long as or shorter than the præfrontals; frontal once and two thirds to twice as long as broad, longer than its distance from the end of the snout, a little shorter than the parietals; loreal as long as deep or deeper than long; one præocular; three (rarely two) postoculars; temporals 1+1 or 1+2; eight or nine upper labials, third, fourth, and fifth, or fourth, fifth, and sixth entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows, rather strongly keeled, the outer, however, perfectly smooth. Ventrals 131–150; anal divided; subcaudals 65–75. Brown or olive above; a series of yellow spots, each between two black spots

or short transverse bands, along each side of the back; upper labials yellowish with black sutures; a yellow, black-edged, oblique streak from the eye to the gape; a yellow band across the nape, behind the parietals; all these markings becoming indistinct with age; belly white, uniform, or closely dotted with brown on the sides.

Total length 660 millim.; tail 190.

S.W. India.

- |  |                        |                              |
|--|------------------------|------------------------------|
| a. Yg. (V. 142; C. 68).  | Nilgherries.           | Col. Boddome [C.]<br>(Type.) |
| b, c-f. ♀ (V. 144; C. 65)<br>& yg. (V. 140, 141, 142,<br>137; C. 74, 66, 66, ♀). | Wynad.                 | Col. Boddome [C.]            |
| g-i. ♀ (V. 144; C. ♀) &<br>yg. (V. 143, 131; C.<br>75, ♀).                       | Anamallays, 4700 feet. | W. Davison, Esq.<br>[P.]     |
| k. ♀ (V. 143; C. 74).  | Peermade, Travancore.  | H. S. Ferguson,<br>Esq. [P.] |
| l-m. ♂ (V. 150, 145; C.<br>♀, 75).   | S. India.              | Col. Boddome [P.]            |

### 58. *Tropidonotus stolatus*.

*Russell, Ind. Serp.* i. pl. x (1796), & pls. xv. B. & xix. (1801).

*Coluber stolatus*, *Linn. S. N.* i. p. 379 (1766); *Daud. Rept.* vii. p. 161 (1803).

*Elaps bilineatus*, *Schneid. Hist. Amph.* ii. p. 299 (1801).

*Coluber bilineatus*, *Daud. t. c.* p. 165.

*Tropidonotus stolatus*, *Boie, Isis*, 1827, p. 535; *Schleg. Phys. Serp.* ii. p. 317 (1837); *Cantor, Cat. Mal. Rept.* p. 90 (1847); *Günth. Cat.* p. 68 (1858); *Peters, Mon. Berl. Ac.* 1861, p. 686; *Günth. Rept. Brit. Ind.* p. 266 (1864); *Theob. Cat. Rept. Brit. Ind.* p. 177 (1876); *Anders. An. Zool. Res. Yunnan*, p. 816 (1879); *Murray, Zool. Sind.* p. 379 (1884); *Boettg. Ber. Offenb. Ver. Nat.* 1888, p. 79; *Bouleng. Faun. Ind., Rept.* p. 348, fig. (1890).

*Amphiesma stolatum*, *Dum. & Bibr.* vii. p. 727 (1854); *Jan, Arch. Zool. An. Phys.* iii. 1865, p. 233.

? *Tropidonotus ruficeps*, *Peters, Mon. Berl. Ac.* 1869, p. 444.

Eye moderate. Rostral twice as broad as deep, just visible from above; internasals much narrowed anteriorly, as long as broad or a little longer, nearly as long as the præfrontals; frontal once and two thirds to twice as long as broad, longer than its distance from the end of the snout, as long as the parietals; loreal as long as deep or deeper; one præ- and three postoculars; temporals 1 + 1 or 1 + 2; eight upper labials normally, third, fourth, and fifth entering the eye; five or six lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows, strongly keeled, outer row smooth. Ventrals 120-161; anal divided; subcaudals 50-89. Greenish or brownish olive, with more or less distinct black spots or reticulated cross bars intersected by two yellow longitudinal bands, which are best marked posteriorly; præ- and postoculars yellowish; lower surfaces white, usually with a black spot on each side of each ventral.

- Total length 680 millim.; tail 180.  
 India and Ceylon, and from Burma and China to the Malay Peninsula; Philippine Islands.
- a-f.* ♂ (V. 155, 157, 152, 157; C. 75, 80, 76, 82) & ♀ (V. 152, 153; C. 78, 73). Nepal. B. H. Hodgson, Esq. [P.]
- g.* Yg. (V. 151; C. 77). Jamu, Himalayas. Messrs. v. Schlagintweit [C.]
- h.* ♂ (V. 151; C. 78). Chamba, Himalayas. Messrs. v. Schlagintweit [C.]
- i.* ♀ (V. 153; C. 78). Darjeeling. T. C. Jerdon, Esq. [P.]
- k.* ♀ (V. 158; C. 82). Khasi Hills. Sir J. Hooker [P.]
- l.* ♂ (V. 156; C. 70). Kurrachee. Messrs. v. Schlagintweit [C.]
- m.* ♂ (V. 152; C. 81). Sind. Messrs. v. Schlagintweit [C.]
- n-p.* ♂ (V. 152; C. 85) & ♀ (V. 148, 150; C. 72, 89). Bombay. Dr. Leith [P.]
- q-r.* ♀ (V. 148; C. 66) & yg. (V. 137; C. 57). Benares. Dr. Sayer [P.]
- s.* ♀ (V. 146; C. 68). Godavery Valley. W. T. Blanford, Esq. [P.]
- t-v.* ♂ (V. 145; C. 73) & ♀ (V. 144, 139; C. 70, 72). Madras. Sir W. Elliot [P.]
- w-z.* ♀ (V. 136, 139, 127, 126; C. 61, ♀, 50, 50). Madras. J. E. Boileau, Esq. [P.]
- a-γ.* ♂ (V. 145, 149; C. 72, 76) & ♀ (V. 145; C. 73). Coonoor, Nilgherries, 5900 ft. W. Davison, Esq. [P.]
- δ, ε.* ♂ (V. 140; C. ?) & ♀ (V. 140; C. ?). Anamallays. Col. Beddome [C.]
- ζ.* Yg. (V. 125; C. 50). Travancore Hills. F. Day, Esq. [C.]
- η.* ♂ (V. 140; C. 67). Candy. Capt. Gascoigne [P.]
- θ.* ♀ (V. 144; C. 75). Ceylon. Dr. Kelaart.
- ι-μ.* ♂ (V. 144, 120, 122; C. 74, ♀, 67) & ♀ (V. 140; C. 62). Ceylon.
- ν.* ♀ (V. 150; C. 73). China. J. Reeves, Esq. [P.]
- ξ-o.* Yg. (V. 148, 151; C. 74, 68). Chusan Archipelago. J. J. Walker, Esq. [P.]
- π-τ, υ.* ♂ (V. 147, 147; C. 65, 75) & ♀ (V. 148, 149, 149; C. 75, 72, 73). Formosa. R. Swinhoe, Esq. [C.]
- φ.* Hgr. (V. 154; C. 70). Hong Kong. J. C. Bowering, Esq. [P.]
- χ.* ♀ (V. 148; C. ?). Hainan. R. Swinhoe, Esq. [C.]
- ψ-ω.* ♂ (V. 141; C. 87) & ♀ (V. 148; C. 78). Near Toungoo. E. W. Oates, Esq. [P.]
- aa-bb.* ♀ (V. 154; C. 69) & yg. (V. 145; C. 80). Pinang. Dr. Cantor.
- cc.* ♂ (V. 151; C. 80). Singapore. Dr. Dennys [P.]
- dd.* Yg. (V. 146; C. 78). Borneo (?). Sir E. Belcher [P.]
- ee.* ♂ (V. 148; C. 83). Madagascar (introduced).

59. *Tropidonotus vittatus*.

*Coluber vittatus*, *Linn. Mus. Ad. Frid.* p. 26, pl. xviii. fig. 2 (1754), and *S. N.* i. p. 330 (1766); *Russell, Ind. Serp.* ii. pl. xxxv. (1801); *Daud. Rept.* vii. p. 130 (1803).

*Natrix vittata*, *Lawr. Syn. Rept.* p. 74 (1768).

*Tropidonotus vittatus*, *Boie, Isis*, 1827, p. 535; *Schleg. Phys. Serp.* ii. p. 318 (1837); *Dum. & Bibr.* vii. p. 600 (1854); *Günth. Cat.* p. 67 (1858); *Jan, Arch. Zool. Nat. Phys.* iii. 1865, p. 217.

Eye moderate. Rostral broader than deep, just visible from above; internasals much narrowed anteriorly, a little longer than broad, nearly as long as the præfrontals; frontal once and two thirds as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal as long as deep or a little deeper; one præ- and three postoculars; temporals 1+1 or 1+2; nine upper labials, fourth, fifth, and sixth entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows, strongly keeled, of outer row smooth. Ventrals 140-149; anal divided; subcaudals 53-84. Pale brown above, with three black longitudinal stripes, lateral broadest and bordered below by a white stripe; sometimes a pair of black lines between the three dorsal stripes; head and nape spotted or marbled with black; labials white, with black sutures; ventrals and subcaudals white, edged with black, the black edge widening on the sides.

Total length 560 millim.; tail 150.

Java and Celebes.

<i>a-b, c-g.</i> ♂ (V. 149, 144, 148; C. 61, 53, 81) & ♀ (V. 144, 144, 142, 140; C. 65, ♀, 77, ♀).	Java.	J. C. Bowring, Esq. [P.].
<i>h-i.</i> ♂ (V. 148; C. 82) & ♀ (V. 144; C. ♀).	Manado.	Dr. A. B. Meyer [C.].

60. *Tropidonotus nigrocinctus*.

*Tropidonotus nigrocinctus*, *Blyth, Journ. As. Soc. Beng.* xxiv. 1856, p. 717; *Günth. Rept. Brit. Ind.* p. 269 (1864); *Theob. Cat. Rept. Brit. Ind.* p. 175 (1876); *Bouleng. Faun. Ind., Rept.* p. 346 (1890); *W. L. Sclater, Journ. As. Soc. Beng.* lx. 1891, p. 239.

Eye large. Rostral broader than deep, just visible from above; internasals as long as broad, broadly truncate in front, shorter than the præfrontals; frontal once and a half as long as broad, a little longer than its distance from the end of the snout and a little shorter than the parietals; loreal slightly longer than deep; one or two præoculars; three postoculars; temporals 1+2 (or 2+2); nine upper labials, fourth, fifth, and sixth entering the eye; five lower labials in contact with the anterior chin-shields, which are a little shorter than the posterior. Scales in 19 rows, strongly keeled, the outer row distinctly keeled. Ventrals 155-160; anal divided; subcaudals 81-89. Olive-grey above, green towards the



head, with narrow transverse black streaks; an oblique black streak below the eye, another behind the eye, and a third on each side of the neck; lower parts yellowish, dotted with brown posteriorly.

Total length 650 millim.; tail 180.

Burma (Pegu and Tenasserim).

a-b. (V. 155, 158; C. 89, Pegu. W. Theobald, Esq. [C.].  
88).

### 61. *Tropidonotus subminiatus*.

*Tropidonotus subminiatus*, Schleg. *Phys. Serp.* ii. p. 313 (1837); *Günth. Cat.* p. 69 (1858), and *Rept. Brit. Ind.* p. 265 (1864); *Anders. Proc. Zool. Soc.* 1871, p. 177; *Stoliczka, Journ. As. Soc. Beng.* xl. 1871, p. 434, pl. xxvi. fig. 3; *Theob. Cat. Rept. Brit. Ind.* p. 177 (1876); *Anders. An. Zool. Res. Yunnan*, p. 822 (1879); *Bouleng. Faun. Ind., Rept.* p. 347 (1890).

*Amphiesma subminiatus*, Dum. & Bibr. vii. p. 754 (1854); *Jan, Arch. Zool. An. Phys.* iii. 1865, p. 234, and *Icon. Gén.* 29, pl. i. fig. 3 (1868).

*Tropidonotus manadensis*, *Günth. Proc. Zool. Soc.* 1873, p. 170.

Eye moderate or rather large. Rostral twice as broad as deep, just visible from above; internasals as long as broad or a little longer, broadly truncate anteriorly, shorter than the præfrontals; frontal once and a half to once and two thirds as long as broad, as long as or a little longer than its distance from the end of the snout, shorter than the parietals; loreal as long as deep or deeper than long; one præocular, three postoculars; temporals 2+2 or 2+3; eight upper labials normally, third, fourth, and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are a little shorter than the posterior. Scales in 19 rows, strongly keeled, of the outer row smooth. Ventrals 132-166; anal divided; subcaudals 65-87. Brownish, greyish olive, or olive-green above, adult uniform or with black and yellow reticulations; neck often tinged with bright vermilion; a dorso-lateral series of light spots may be present; a black oblique spot below the eye, on a white ground, is usually present; young with a jet-black cross band on the nape, bordered with yellow posteriorly; belly yellowish; frequently a black dot on the outer end of each ventral shield.

Total length 1060 millim.; tail 255.

From the Eastern Himalayas, Assam, Burma, and Southern China, to the Malay Peninsula and Archipelago.

- |  |                                     |                               |
|--|-------------------------------------|-------------------------------|
| a. ♀ (V. 164; C. 76).  | Himalayas.                          | T. C. Jerdon, Esq.<br>[P.].   |
| b. ♂ (V. 164; C. ?).   | Sikkim.                             | Sir J. Hooker [P.].           |
| c. ♀ (V. 166; C. 86).  | Khasi Hills.                        | Dr. Griffith.                 |
| d. Yg. (V. 163; C. 82).  | Khasi Hills.                        | T. C. Jerdon, Esq.<br>[P.].   |
| e-g. ♂ (V. 139; C. 76),<br>hgr. ♀ (V. 143; C. 68),<br>& yg. (V. 132; C. 70). | Hong Kong.                          | J. C. Bowering, Esq.<br>[P.]. |
| h. ♂ (V. 164; C. 75).  | Toungyi, Shan States,<br>5000 feet. | Lieut. Blakeway<br>[C.].      |

i. ♂ (V. 149; C. 82).	Tenasserim.	Dr. Packman [P.].
k. ♂ (V. 154; C. P).	Tenasserim.	Col. Beddome [C.].
l, m. ♂ (V. 153; C. 75) & yg. (V. 147; C. 80).	Lao Mountains.	M. Mouhot [C.].
n. ♂ (V. 144; C. 77).	Siam.	M. Mouhot [C.].
o-p. ♀ (V. 149, 157; C. 73, 77).	Camboja.	M. Mouhot [C.].
q. ♀ (V. 144; C. ?).	Java.	Leyden Mus.
r. Yg. (V. 140; C. P).	Java.	Dr. Horsfield.
s. Hgr. ♂ (V. 141; C. 73).	Java.	Dr. Ploem [C.].
t. ♀ (V. 139; C. 69).	Java.	Lidth de Jeude Col- lection.
u. ♀ (V. 140; C. ?).	Java.	
v. ♂ (V. 139; C. 76).	Manado, Celebes.	Dr. A. B. Meyer [C.].
w. Yg. (V. 147; C. 70).	Ternate.	(Type of <i>T. manadensis</i> ). H.M.S. 'Challenger.' — ger.'

62. *Tropidonotus spilogaster*.

*Tropidonotus spilogaster*, Boie, *Isis*, 1827, p. 535; Dum. & Bibr. vii. p. 598 (1854); Günth. *Cat.* p. 66 (1858); Jan, *Arch. Zool. Anat. Phys.* iii. 1865, p. 225, and *Icon. Gén.* 27, pl. ii. fig. 1 (1868); Fischer, *Arch. f. Nat.* 1882, p. 282.

— quincunciatus, var., Schley, *Phys. Serp.* p. 309 (1837); Eyd. & Gerv. *Voy. Favorite, v. Zool.* p. 69, pl. xxviii. (1839).

Eye rather large. Rostral broader than deep, just visible from above; internasals as long as broad or longer, broadly truncate anteriorly, as long as the præfrontals; frontal once and a half to once and two thirds as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal as long as deep or a little deeper; one or two præ- and three or four post-oculars; temporals 2+2 or 2+3; nine upper labials, fourth, fifth, and sixth entering the eye; five or six lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows, strongly keeled, of outer row feebly keeled. Ventrals 148-156; anal divided; subcaudals 75-92. Olive above, with more or less distinct blackish spots forming transverse series, which are interrupted by two light dorsal stripes or series of light spots; usually a light spot on the nape; upper labials yellowish, usually with dark sutures; yellowish below, usually regularly dotted with black.

Total length 870 millim.; tail 240.

Philippine Islands.

## A. Belly with black dots.

a, b-c. ♂ (V. 151; C. 92) & ♀ (V. 152, 150; C. 87, ?).	Philippines.	H. Cuming, Esq. [C.]
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- d.* Yg. (V. 148; C. ?). Philippines. Hr. Salmin [C.]  
*e.* ♀ (V. 150; C. 85). Negros. Dr. A. B. Meyer  
 [C.]

## B. Belly without dots.

- f.* ♀ (V. 154; C. ?). Puerto Princesa. A. Everett, Esq.  
 [C.]

63. *Tropidonotus chrysargus*.

*Tropidonotus chrysargus*, *Schleg. Phys. Serp.* ii. p. 312, pl. xii. figs. 6 & 7 (1837); *Günth. Cat.* p. 70 (1858); *Fischer, Arch. f. Nat.* 1885, p. 57, pl. iv, fig. 2; *Bouleng. Faun. Ind., Rept.* p. 345 (1890).

— *juncus*, *Cantor, Cat. Mal. Rept.* p. 93 (1847); *Blyth, Journ. As. Soc. Beng.* xxiv. 1855, p. 716; *Günth. Rept. Brit. Ind.* p. 268, pl. xxii. fig. F (1864); *Stoliczka, Journ. As. Soc. Beng.* xl. 1871, p. 434.

*Leptophis albomaculatus*, *Dum. & Bibr.* vii. p. 541 (1854).

*Amphiesma chrysargum*, part., *Dum. & Bibr. t. c.* p. 739.

*Tropidonotus dipsas*, *Blyth, Journ. As. Soc. Beng.* xxiii. 1854, p. 297.

? *Tropidonotus zebrinus*, *Blyth, l. c.* p. 297.

*Amphiesma chrysargum*, *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 234.

— *platyceps*, *Jan, Icon. Gén.* 29, pl. ii. fig. 1 (1868).

*Tropidonotus maculatus*, var. *torquatus*, *Mocquard, Nouv. Arch. Mus.* (3) ii. 1890, p. 139.

Eye large. Rostral just visible from above; internasals as long as broad or a little longer, nearly as long as the præfrontals; frontal once and two thirds to once and three fourths as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal nearly as deep as long; one or two præoculars; three postoculars; temporals 2+2 or 2+3; nine or eight upper labials, fourth, fifth, and sixth, or third, fourth, and fifth, entering the eye; five or six lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows, all strongly keeled. Ventrals 143-175; anal divided; subcaudals 60-93. Brownish or olive-green above, usually with a series of yellow spots or short transverse bars along each side of the back; young with black spots and cross bars, which become indistinct with age; upper lip white, with the sutures between the labials black, the white colour extending as a more or less distinct angular or crescentic band on the nape; belly yellowish, with or without blackish dots, and with a more or less distinct series of small black spots along each side; specimen *i* has the ventrals olive, edged with yellowish and three dark lines run along the belly.

Total length 680 millim.; tail 190.

From the Eastern Himalayas, Assam, Burma, and Southern China to the Malay Peninsula, Sumatra, Borneo, and Java.

- a.* ♀ (V. 168; C. ?). Nepal. B. H. Hodgson, Esq.  
 [P.]

b. Yg. (V. 161; C. 85).	Darjeeling.	W. T. Blanford, Esq. [P.].
c. ♂ (V. 167; C. 92).	Sikkim.	Messrs. v. Schlagin- tweit [C.].
d. Yg. (V. 143; C. 91).	Chikiang.	Mr. Fortune [C.].
e. ♀ (V. 159; C. 90).	Tenasserim.	W. T. Blanford, Esq. [P.].
f. ♀ (V. 162; C. ?).	Tenasserim.	Col. Beddome [C.].
g. ♂ (V. 165; C. 93).	Burma.	Prof. Oldham [P.].
h. ♂ (V. 163; C. 85).	Perak (hills over 3000 feet).	L. Wray, Esq. [P.].
i. ♀ (V. 157; C. 88).	Pinang.	Dr. Cantor. (Type of <i>T. junceus</i> .)
k. ♀ (V. 175; C. 75).	Mt. Singalang, Suma- tra.	Dr. Beccari [C.]. Marquis G. Doria [E.].
l-o. ♀ (V. 162, 162, 164, 154; C. ♀, ♀, 76, ♀).	Nias.	Hr. Sundermann [C.].
p. Yg. (V. 143; C. 60).	Borneo.	Sir E. Belcher [P.].
q. Yg. (V. 145; C. 79).	Borneo.	Hr. Carl Bock [C.].
r. ♂ (V. 145; C. 75).	Rejang River, Sara- wak.	Brooke Low, Esq. [P.].
s. ♂ (V. 151; C. 81).	Mt. Dulit, Borneo.	C. Hose, Esq. [C.].
t. ♀ (V. 150; C. 76).	Willis Mountains, Ke- diri, Java, 5009 feet.	Baron v. Huegel [C.].
u. Hgr. ♀ (V. 153; C. 82).	Batavia.	
v. w. ♀ (V. 157, 157; C. 79, ♀).	Java.	Leyden Mus.
x. ♀ (V. 153; C. ?).	Java.	Dr. Ploem [C.].
y. ♂ (V. 161; C. ?).	Java.	

#### 64. *Tropidonotus monticola*.

*Tropidonotus monticola*, *Jerdon, Journ. As. Soc. Beng.* xxii. 1853, p. 530; *Günth. Rept. Brit. Ind.* p. 267 (1864); *Bouleng. Faun. Ind., Rept.* p. 348 (1890).

Eye large. Rostral broader than deep, just visible from above; internasals as long as broad, broadly truncate in front, shorter than the præfrontals; frontal once and a half to once and two thirds as long as broad, longer than its distance from the end of the snout, as long as the parietals; loreal as long as deep, or deeper; one præ- and three postoculars; temporals 2+2; eight upper labials, third, fourth, and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are a little shorter than the posterior. Scales in 19 rows, strongly keeled, the outer row smooth or feebly keeled. Ventrals 134-142; anal divided; subcaudals 80-92. Green above, with black cross bands divided on each side by a pale spot; a white line across the head behind the eyes, and a white dot on each side of the frontal; præ- and postoculars and labials 3 to 6, white; lower parts white.

Total length 450 millim.; tail 140.

S.W. India.



a-b. ♀ (V. 135; C. 80) & yg. (V. 134; C. 90).	S. Canara.	Col. Beddome [C.].
c-d. ♀ (V. 140, 133; C. 92, 90).	Wynad.	Col. Beddome [C.].
e. Hgr., bad state.	Anamallays.	Col. Beddome [C.].
f. ♂ (V. 137; C. 82).	— ?	

### 65. *Tropidonotus maculatus*.

*Tropidonotus maculatus*, *Edeling, Nederl. Tijdschr. Dierk.* ii. 1864, p. 203; *Günth. Zool. Rec.* 1872, p. 74.

*Amphiesma substolatum*, *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 233, and *Icon. Gén.* 29, pl. i. fig. 1 (1868).

*Tropidonotus sundanensis*, *Günth. Ann. & Mag. N. II.* (3) xv. 1865, p. 95, pl. ii. fig. D.

— *sarawaensis* (*non Günth.*), *Fischer, Arch. f. Nat.* 1885, p. 54.

Form slender. Eye very large. Rostral broader than deep, scarcely visible from above; internasals as broad as long, trapezoid, as long as the præfrontals; frontal once and a half as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal as deep as long, or deeper; one præ- and three postoculars; temporals 2+3; nine upper labials, fourth, fifth, and sixth entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows, all strongly keeled. Ventrals 14-156; anal divided; subcaudals 95-113. Olive above, with four longitudinal series of small square black spots and two of yellowish ones; upper labials yellowish with black sutures; lower parts yellowish, the shields edged with black.

Total length 810 millim.; tail 270.

Malay Peninsula, Sumatra, Borneo.

a. Yg. (V. 146; C. 113).	Malacca.	D. F. A. Hervey, Esq. [P.].
b. ♀ (V. 145; C. 95).	Siboga, Sumatra.	Dr. Bleeker.
c. Yg. (V. 146; C. 108).	Mt. Dulit, Borneo.	(Type of <i>T. sundanensis</i> ). C. Hose, Esq. [C.].

### 66. *Tropidonotus chrysargoides*. (PLATE XVI. fig. 1.)

*Amphiesma chrysargum*, part., *Dum. & Bibr.* vii. p. 739 (1854).

*Tropidonotus chrysargoides*, *Günth. Cat.* p. 71 (1858); *Fischer, Arch. f. Nat.* 1882, p. 284.

*Amphiesma chrysargoides*, *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 236.

Eye rather large. Rostral broader than deep, scarcely visible from above; internasals longer than broad, broadly truncate in front, as long as the præfrontals; frontal once and a half as long as broad, as long as or a little longer than its distance from the end of the snout, a little shorter than the parietals; loreal as long as deep or a little deeper; one præ- and three postoculars; temporals

2+2 or 2+3; nine upper labials, fourth, fifth, and sixth entering the eye; five or six lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 21 rows, all strongly keeled. Ventrals 154-161; anal divided; subcaudals 64-79. Uniform dark olive above; upper lip yellowish; lower parts yellowish, the shields edged with olive.

Total length 710 millim.; tail 165.

Java, Celebes.

- |                       |             |                        |
|-----------------------|-------------|------------------------|
| a. ♀ (V. 161; C. 73). | Java.       | Leyden Museum. (Type.) |
| b. ♂ (V. 154; C. 79). | N. Celebes. | Dr. A. B. Meyer [C.].  |

67. *Tropidonotus saravacensis*. (PLATE XVI. fig. 2.)

*Tropidonotus saravacensis*, Günth. Proc. Zool. Soc. 1872, p. 596, and Zool. Rec. 1872, p. 74.

Head short, very distinct from neck. Eye large. Rostral broader than deep, not or scarcely visible from above; internasals as long as broad, as long as or a little shorter than the præfrontals; frontal once and a half as long as broad, longer than its distance from the end of the snout, shorter than the parietals; loreal deeper than long; one præ- and three postoculars; temporals 2+3; eight upper labials, third, fourth, and fifth entering the eye; five or six lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 17 rows, all strongly keeled. Ventrals 140-154; anal divided; subcaudals 52-89. Olive-brown above, with a series of blackish cross bars, and two series of yellow spots, which may be replaced by two yellowish stripes; or blackish with bright orange spots on the anterior half of the body; a lateral series of black spots; upper surface of head vermiculated with black; labials yellowish, with black sutures; belly checkered black and yellow, or the black predominating.

Total length 560 millim.; tail 160.

Borneo.

- |  |                    |                     |
|--|--------------------|---------------------|
| a-c. ♂ (V. 151; C. 84) & ♀ (V. 154, 149; C. 82, 89). | Matang.            | (Types.)            |
| d. ♀ (V. 140; C. 52).                                | Matang.            |                     |
| e-f. ♀ (V. 144, 151; C. 74, 88).                     | Mt. Dulit, Borneo. | C. Hose, Esq. [C.]. |

68. *Tropidonotus auriculatus*. (PLATE XVII. fig. 1.)

*Tropidonotus auriculatus*, Günth. Cat. p. 80 (1858); Peters, Mon. Berl. Ac. 1861, p. 687.

Head short and thick, very distinct from neck. Eye very large. Body slender. Rostral broader than deep, scarcely visible from above; internasals longer than broad, broadly truncate anteriorly, longer than the præfrontals; frontal once and a half to once and two thirds as long as broad, longer than its distance from the end

of the snout, shorter than the parietals; loreal deeper than long; one or two præ- and three postoculars; temporals 2+2; eight upper labials, third, fourth, and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 17 rows, all strongly keeled. Ventrals 152-157; anal divided; subcaudals 76-91. Dark olive-brown above, with a yellowish vertebral stripe; a white lateral stripe along the outer row of scales, expanding, club-shaped on the temple; forehead yellowish brown, with blackish vermiculations; a black cross bar between the eyes; labials white, with black sutures; belly white, with three black longitudinal bands, the middle one broadest, or black posteriorly, with two series of white spots; lower surface of tail white in the middle, black on the sides; these markings becoming indistinct in full-grown specimens.

Total length 400 millim.; tail 115.

Philippine Islands.

- a. ♀ (V. 152; C. 76). Philippines. H. Cuming, Esq. [C.]  
(Type.)  
b-e. ♂ (V. 156, 157, 155; Pasananca. H.M.S. 'Challenger.'  
C. 91, 89, 85) & ♀ (V.  
156; C. ?).

#### 69. *Tropidonotus crebripunctatus*.

*Tropidonotus crebripunctatus*, *Wiegman, N. Acta Ac. Leop.-Carol.* xvii. i. 1835, p. 250.

Head short, very distinct from neck. Eye very large. Rostral broader than deep, just visible from above; internasals as long as broad, as long as the præfrontals; frontal once and three fifths as long as broad, longer than its distance from the end of the snout, as long as the parietals; loreal as long as deep; two præ- and three postoculars; temporals 2+3; eight to ten upper labials (the specimen in the collection has eight on one side, ten on the other), fourth and fifth, fifth or sixth, or sixth and seventh entering the eye; four lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 19 rows, all strongly keeled. Ventrals 148-166; anal divided; subcaudals 96-101. Olive above, vertebral line lighter and crossed by narrow black bars; upper lip yellowish, the shields black-edged above; belly whitish, with a black dot at the outer end of each shield; posterior ventrals brown on the sides; subcaudals entirely brown.

Total length 680 millim.; tail 230.

Philippine Islands.

- a. ♀ (V. 166; C. 101). Philippine Islands. H. Cuming, Esq. [C.].

#### 70. *Tropidonotus lineatus*.

*Tropidonotus lineatus*, *Peters, Mon. Berl. Ac.* 1861, p. 686.

Apparently very closely allied to the preceding, but with a single anterior temporal and fewer ventrals (142) and subcaudals (66).

Samar Island, Philippines.

71. *Tropidonotus flavifrons*.

*Tropidonotus flavifrons*, *Bouleng. Ann. & Mag. N. II.* (5) xx. 1887, p. 96; *Mocquard, Nouv. Arch. Mus.* (3) ii. 1890, p. 140, pl. ix. fig. 2.

Head short, very distinct from neck. Eye moderate. Internasals broadly truncated in front, about half as large as the prefrontals; frontal once and a half as long as broad, longer than its distance from the end of the snout, shorter than parietals; loreal as deep as long; one præ- and two or three postoculars; temporals 2+3; eight or nine upper labials, fourth and fifth or fifth and sixth entering the eye. Scales in 19 rows, feebly keeled, of outer row smooth. Ventrals 146-155; anal entire; subcaudals 95-99. Olive above, with dark network; two parallel or alternating series of white spots along each side, upper on the sixth scale from the ventral, lower larger and on the outer border of the ventral; a large yellow spot covers the forehead and snout; sutures between the labials black; ventrals whitish, with large black spots; the black predominates on the subcaudals.

Total length 540 millim.; tail 179.

Mt. Kina Baloo, North Borneo.

a. ♂ (V. 148; C. 95).

Kina Baloo.

Mr. Whitehead [C].  
Paris Museum [E].

72. *Tropidonotus callistus*.

*Tropidonotus callistus*, *Günth. Proc. Zool. Soc.* 1873, p. 170, pl. xvii. fig. C; *Peters & Doria, Ann. Mus. Genova*, xiii. 1878, p. 388.

Head short and thick, very distinct from neck. Eye large. Rostral broader than deep, scarcely visible from above; internasals longer than broad, broadly truncate in front, longer than the prefrontals; frontal once and two thirds as long as broad, longer than its distance from the end of the snout, a little shorter than the parietals; loreal deeper than long; one præ- and four postoculars; temporals 2+2; nine upper labials, fourth, fifth, and sixth entering the eye; five or six lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 21 rows, strongly keeled, of outer row feebly keeled. Ventrals 156; anal divided; subcaudals 76. Black above, with a whitish vertebral stripe with scolloped edge on its anterior half; a round white spot on each side behind the head, and a white band across the anterior half of the frontal and supraoculars and on the præoculars; upper labials white, with black sutures; ventrals and outer row of scales white, with a black band on each side along the outer ends of the ventrals.

Total length 295 millim.; tail 70.

Celebes.

a. Hgr. (V. 156; C. 76).

N. Celebes.

Dr. A. B. Meyer [C].  
(Type.)



IV. MACROPHNIS.—Maxillary teeth 35–40, posterior but slightly enlarged. Eye very large. Body very slender.

Fig. 16.



Maxillary of *Tropidonotus hypomelas*.

### 73. *Tropidonotus hypomelas*.

*Tropidonotus hypomelas*, *Günth. Proc. Zool. Soc.* 1877, p. 130, fig.

Eye very large. Body very slender. Rostral twice as broad as deep, scarcely visible from above; internasals longer than broad, broadly truncate anteriorly, as long as the præfrontals; frontal once and a half as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal as long as deep; two præ- and three postoculars; temporals 2+3; nine upper labials, fifth and sixth entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 17 rows, all strongly keeled. Ventrals 196; anal divided; subcaudals 99–105. Brownish olive above, with small black spots, and a series of pale spots along each side of the back on the posterior two thirds of the body; upper labials white, with black sutures; belly whitish anteriorly, black or blackish posteriorly, with a median series of black spots, one on each shield.

Total length 960 millim.; tail 270.

Duke of York Island and New Britain.

- |                        |                      |                               |
|------------------------|----------------------|-------------------------------|
| a. ♂ (V. 196; C. 99).  | Duke of York Island. | Rev. G. Brown [C.]<br>(Type.) |
| b. ♂ (V. 196; C. 105). | New Britain.         | Museum Godeffroy.             |

### 74. *Tropidonotus dendrophiops*.

*Tropidonotus dendrophiops*, *Günth. Ann. & Mag. N. II.* (5) xi. 1883, p. 136, fig.

— *hypomelas?*, *F. Müller, Verh. nat. Ges. Basel*, vii. 1883, p. 286.

Eye very large. Habit slender. Rostral twice as broad as deep, just visible from above; internasals longer than broad, broadly truncate anteriorly, nearly as long as the præfrontals; frontal once and a half as long as broad, as long as its distance from the end of the snout; loreal square; one or two præ- and three postoculars; temporals 2+3; nine upper labials, fourth, fifth, and sixth entering the eye; five lower labials in contact with the anterior chin-shields,

which are shorter than the posterior. Scales in 17 rows, all strongly keeled. Ventrals 157; anal divided; subcaudals 100. Olive above, with black spots and two series of yellowish black-edged spots; upper lip yellowish; lower parts yellowish, with black spots, which become very numerous on the posterior two thirds of the body and on the tail.

Total length 900 millim.; tail 270.

Philippine Islands.

a. ♀ (V. 157; C. 100). Zamboanga. H.M.S. 'Challenger.'  
(Type.)

### 11. MACROPISTHODON.

Tropidonotus, part., *Schleg. Phys. Serp.* ii. p. 297 (1837); *Günth. Rept. Brit. Ind.* p. 258 (1864); *Bouleng. Faun. Ind., Rept.* p. 341 (1890).

Amphiesma, part., *Dum. & Bibr. Erp. Gén.* vii. p. 724 (1854); *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 232.

Xenodon, part., *Dum. & Bibr. t. c.* p. 753; *Jan, op. cit.* ii. 1863, p. 316; *Günth. Cat. Col. Sn.* p. 53 (1858).

Maxillary teeth 12 to 20, followed after an interspace by a pair of extremely large fangs; mandibular teeth subequal. Head distinct from neck; eye moderate or large, with round pupil. Body stout; scales strongly keeled, in 19 to 27 rows, with apical pits; ventrals rounded. Tail moderate; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

East Indies.

Fig. 17.



Maxillary of *Macropisthodon flaviceps*.

#### *Synopsis of the Species.*

- |   |                                 |
|---|---------------------------------|
| Maxillary teeth 18 to 20+2; scales in 19 rows; ventrals 120-138; subcaudals 49-60; black, or with black cross bands . . . . . | 1. <i>flaviceps</i> , p. 266.   |
| Maxillary teeth 12 to 15+2; scales in 19 rows; ventrals 128-138; subcaudals 42-58; a dark vertebral stripe . . . . .          | 2. <i>rhodomelas</i> , p. 266.  |
| Maxillary teeth 12 or 13+2; scales in 23 to 27 rows; ventrals 144-160; subcaudals 35-50; green or greenish . . .              | 3. <i>plumbicolor</i> , p. 267. |

1. *Macropisthodon flaviceps*.

- Amphiesma flaviceps*, *Dum. & Bibr.* vii. p. 738 (1854); *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 235, and *Icon. Gén.* 29, pl. iii. fig. 1 (1863).  
*Tropidonotus leucomelas*, *Günth. Rept. Brit. Ind.* p. 271, pl. xxii. fig. I (1864), and *Zool. Rec.* 1868, p. 124; *F. Müll. Verh. nat. Ges. Basel*, vii. 1882, p. 148.  
*Amphiesma rufotorquatum*, *Edeking, Nederl. Tijdschr. Dierk.* ii. 1864, p. 204.  
*Tropidonotus flaviceps*, *Günth. Proc. Zool. Soc.* 1872, p. 590; *Fischer, Arch. f. Nat.* 1885, p. 53.

Maxillary teeth 18 to 20 + 2. Rostral twice as broad as deep, just visible from above; internasals as long as broad, or longer, shorter than the prefrontals; frontal a little longer than broad, as long as or a little shorter than its distance from the end of the snout, shorter than the parietals; loreal as long as deep, or deeper; one præocular; three or four (rarely two) postoculars; temporals 2 + 2 or 2 + 3; eight (rarely seven) upper labials, fourth and fifth (or third and fourth) entering the eye; five or six lower labials in contact with the anterior chin-shields; posterior chin-shields longer than the anterior. Scales very strongly keeled, in 19 rows. Ventrals 120-138; anal divided; subcaudals 49-60. Body black, young with greyish-white or pale olive cross bars, widening towards the sides, and of which at least traces persist in the adult; a broad orange band across the nape, sometimes disappearing in the adult, separated from the head, which is yellowish brown or olive, by a broad black band; belly olive, with black cross bands, or entirely black.

Total length 840 millim.; tail 190.

Malay Peninsula, Sumatra, Borneo.

- |  |                                  |  |
|--|----------------------------------|--|
| a-b. ♂ (V. 128; C. 60) &<br>♀ (V. 133; C. 60).                                   | Perak.                           | L. Wray, Esq. [P.].                                      |
| c. Yg. (V. 129; C. 61).  | Pinang (?).                      | Gen. Hardwicke [P.].<br>(Type of <i>T. leucomelas</i> .) |
| d-e. ♀ (V. 135; C. 54) &<br>yg. (V. 133; C. 49).                                 | District of Deli,<br>W. Sumatra. | Mr. Iversen [C.].  |
| f-i. ♂ (V. 124, 124; C. 54,<br>53), ♀ (V. 130; C. 52),<br>& yg. (V. 120; C. 53). | Borneo.                          | L. L. Dillwyn, Esq. [P.].                                |
| k-m. ♂ (V. 133; C. 56),<br>♀ (V. 130; C. 49), &<br>yg. (V. 121; C. 58).          | S.E. Borneo.                     |  |
| n. Yg. (V. 124; C. 59).  | —?                               | Dr. Bleeker.   |

2. *Macropisthodon rhodomelas*.

- Tropidonotus rhodomelas*, *Boie, Isis*, 1827, p. 535; *Schleg. Phys. Serp.* ii. p. 310, pl. xii. figs. 10 & 11 (1837); *Blanf. Proc. Zool. Soc.* 1881, p. 221.  
*Amphiesma rhodomelas*, *Dum. & Bibr.* vii. p. 737 (1854); *Girard, U.S. Explor. Exped., Herp.* p. 165 (1853); *Jan, Arch. Zool.*

*Anat. Phys.* iii. 1865, p. 234, and *Icon. Gén.* 29, pl. ii. fig. 2 (1868).

*Xenodon rhodomelas*, *Günth. Cat.* p. 58 (1858).

*Tropidonotus mortoni*, *Theob. Cat. Rept. As. Soc. Mus.* p. 57 (1868).

Maxillary teeth 12 to 15+2. Rostral at least twice as broad as deep, scarcely visible from above; internasals as long as broad, shorter than the præfrontals; frontal once and one fourth or once and one third as long as broad, a little longer than its distance from the end of the snout, a little shorter than the parietals; loreal as long as deep or a little deeper; one præocular, usually with a small subocular below; three or four postoculars; temporals 2+2, 2+3, or 3+3; seven (rarely eight) upper labials, third and fourth (or fourth and fifth) entering the eye; four or five lower labials in contact with the anterior chin-shields; both pairs of chin-shields broad and subequal in length, or hinder pair longer. Scales strongly keeled, in 19 rows. Ventrals 128-138; anal divided; subcaudals 42-58. Greyish or pale reddish brown above, with a dark brown or black vertebral stripe which expands in a V-shaped blotch on the nape; lips, throat, and sides of belly pink, middle of belly yellow; a series of small black spots along each side of the belly.

Total length 520 millim.; tail 85.

Malay Peninsula, Sumatra, Borneo, Java.

a-b. ♂ (V. 133; C. 52)	Singapore.	Dr. Dennys [P.].
& hgr. (V. 133; C. 47).		
c. Hgr. (V. 133; C. 51).	Singapore.	W. Davison, Esq. [C.].
d. ♀ (V. 137; C. 50).	Matang.	
e. ♀ (V. 138; C. 58).	Mt. Dulit, Borneo.	C. Hose, Esq. [C.].
f. ♀ (V. 134; C. 42).	Java.	
g. Yg. (V. 128; C. 50).	----	Col. Beddome.

### 3. *Macropisthodon plumbicolor*.

*Tropidonotus plumbicolor*, *Cantor, Proc. Zool. Soc.* 1839, p. 54; *Günth. Rept. Brit. Ind.* p. 272 (1864), and *Zool. Rec.* 1865, p. 154; *Stoliczka, Journ. As. Soc. Beng.* xl. 1871, p. 438; *Anders. Proc. Zool. Soc.* 1871, p. 176; *Theob. Cat. Rept. Brit. Ind.* p. 179 (1876); *Murray, Zool. Sind*, p. 380 (1884); *Bouleng. Faun. Ind., Rept.* p. 351 (1890).

*Xenodon viridis*, *Dum. & Bibr.* vii. p. 763 (1854); *Günth. Cat.* p. 57 (1858); *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 319.

*Trigonocephalus elliotti*, *Jerdon, Journ. As. Soc. Beng.* xxii. 1854, p. 523.

*Amphiesma brachyurum*, *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 237, and *Icon. Gén.* 29, pl. iii. fig. 2 (1868).

*Halys elliotti*, *Theob. l. c.* p. 225.

Maxillary teeth 12 or 13+2. Rostral at least twice as broad as deep, scarcely visible from above; internasals as long as broad or broader, shorter than the præfrontals; frontal once and one fourth or once and one third as long as broad, as long as or a little longer than its distance from the end of the snout, as long as or a little



shorter than the parietals; loreal as long as deep or deeper, sometimes entering the eye; two preoculars; three or four postoculars; temporals 2+3 or 4; seven upper labials, third and fourth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales strongly keeled, in 23 to 27 rows. Ventrals 144-160; anal usually divided; subcaudals 35-50. Dull green above, uniform or with traces of black markings; young with a large  $\Lambda$ - or chevron-shaped black mark on the nape and occiput, the point on the frontal shield, bordered posteriorly with bright yellow; a black band from the eye to the angle of the mouth, and more or less regular transverse black spots or bands on the body; belly blackish, or yellowish with or without brown spots.

Total length 770 millim.; tail 90.

India and Ceylon.

- |   |                                  |                        |
|---|----------------------------------|------------------------|
| a. ♀ (Sc. 23; V. 149; C. 46).   | Subbut Rungee, Bengal.           | Sir E. Home [P.].      |
| b-c. ♀ (Sc. 23; V. 160; 157; C. 41, 42).  | N. India.                        | — Hearsey, Esq. [P.].  |
| d. ♀ (Sc. 25; V. 148; C. 39).   | Lanowli, Deccan.                 | H. Phipson, Esq. [P.]. |
| e. ♀ (Sc. 25; V. 156; C. 43).   | Poonah.                          | Dr. Leith [P.].        |
| f-g. ♂ (Sc. 27; V. 159; C. 45) & yg. (Sc. 25; V. 154; C. 38).   | Matheran.                        | Dr. Leith [P.].        |
| h, i-m. ♂ (Sc. 25; V. 146; C. 40), hgr. (Sc. 25; V. 155; C. 50), & yg. (Sc. 23, 23, 26; V. 152, 153, 153; C. 40, 40, 36). | Madras.                          | Sir W. Elliot [P.].    |
| n-o. ♂ (Sc. 25; V. 156; C. 43) & yg. (Sc. 25; V. 154; C. 39).   | Anamallays.                      | Col. Beddome [C.].     |
| p. ♀ (Sc. 23; V. 156; C. 36).   | Anamallays, 4700 feet.           | W. Davison, Esq. [P.]. |
| q-s. ♀ (Sc. 27; V. 152; C. 39), hgr. (Sc. 25; V. 144; C. 35), & yg. (Sc. 25; V. 148; C. 44).                              | Coonoor, Nilgherries, 5900 feet. | W. Davison, Esq. [C.]. |
| t. Yg. (Sc. 23; V. 151; C. 45).   | Ceylon.                          |                        |
| u. Yg. (Sc. 27; V. 151; C. 42).   | Java (?).                        | Dr. Horsfield.         |

## 12. LIQHETERODON.

*Leioheterodon*, *Dum. & Bibr. Erp. Gén., Atlas*, pl. lxi. (1844).

*Heterodon*, part., *Dum. & Bibr. Erp. Gén.* vii. p. 764 (1854); *Günth. Cat. Col. Sn.* p. 82 (1858).

*Anomalodon*, *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 227.

Maxillary teeth 10 to 12, followed, after an interspace, by a pair of strongly enlarged fangs; mandibular teeth subequal. Head

scarcely distinct from neck; snout pointed, projecting; rostral large, subtriangular; eye large, with round pupil. Body cylindrical; scales smooth, with apical pits, in 21 or 23 rows; ventrals rounded or obtusely angulate laterally. Tail moderate; subcaudals all or part in two rows. Hypapophyses developed throughout the vertebral column.

Madagascar.

### 1. *Lioheterodon madagascariensis*.

*Heterodon madagascariensis*, *Dum. & Bibr.* vii. p. 776, pl. lxi. (1854); *Boettg. Abh. Senck. Ges.* xi. 1877, p. 5, and xii. 1881, p. 442.

*Anomalodon madagascariensis*, *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 227, and *Icon. Gén.* 10, pl. vi. fig. 1 (1865).

Portion of rostral visible from above as long as or a little shorter than its distance from the frontal; internasals as long as the præ-frontals; frontal nearly once and a half as long as broad, as long as its distance from the end of the snout or a little shorter, as long as the parietals; loreal longer than deep; one præ- and three or four postoculars; temporals small, scale-like; eight upper labials, fourth and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are a little longer than the posterior. Scales in 23 rows. Ventrals 206-216; anal entire; subcaudals 62-73, the anterior single. Brown or black above, with pale brown or yellowish spots; sides yellowish, with two alternating series of black spots, the upper of which may be confluent into a zigzag band; upper labials yellowish, with black sutures; lower parts yellowish, with small black spots.

Total length 1020 millim.; tail 170.

Madagascar.

a. ♀ (V. 206; C. 62).	Imerina.	Rev. R. Baron [C.].
b. ♀ (V. 216; C. 67).	Madagascar.	Rev. R. Baron [C.].
c, d. ♀ (V. 207; C. 64)	Madagascar.	
& yg. (V. 210; C. 70).		

### 2. *Lioheterodon modestus*. (PLATE XVIII. fig. 1.)

*Heterodon madagascariensis*, *Günth. Cat.* p. 84 (1858).

— *modestus*, *Günth. Ann. & Mag. N. II.* (3) xii. 1863, p. 356.

*Anomalodon madagascariensis*, *Steindachn. Novara, Rept.* p. 90 (1867).

Closely allied to the preceding, but scales in 21 rows, ventrals 159-170, and subcaudals 54-62, all in pairs, or a few of the anterior single. Pale brown above, uniform or with two or three more or less distinct darker stripes; uniform yellowish below.

Total length 920 millim.; tail 200.

Madagascar.

a. ♂ (V. 165; C. 62).	Madagascar.	(Type.)
b. ♀ (V. 166; C. 59).	Madagascar.	
c. ♂ (V. 170; C. 56).	Imerina.	Rev. R. Baron [C.].
d. Hgr. (V. 162; C. 54).	S.E. Betsileo.	Mr. T. Waters [C.].

### 13. PSEUDOXENODON.

Xenodon, part., *Boie, Isis*, 1827, p. 540; *Schleg. Phys. Serp.* ii. p. 80 (1837); *Günth. Cat. Col. Sn.* p. 53 (1858); *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 316.

Xenodon, *Wagl. Syst. Amph.* p. 171 (1830).

Tropidonotus, part., *Günth. Rept. Brit. Ind.* p. 258 (1864).

Pseudoxenodon, *Bouleng. Faun. Ind., Rept.* p. 340 (1890).

Maxillary teeth 20 to 28, increasing in size posteriorly, the two last abruptly enlarged and separated from the others by an interspace; mandibular teeth subequal. Head distinct from neck, which is dilatable; eye large, with round pupil. Body cylindrical; scales on the anterior part of the body disposed obliquely, narrow and much imbricate, in 17 or 19 rows; dorsals keeled; no apical pits: ventrals rounded. Tail moderate; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

East Indies and Southern China.

#### *Synopsis of the Species.*

- One præocular; scales in 19 rows anteriorly; ventrals 158-173; subcaudals 55-75 . . . . . 1. *macrops*, p. 270.
- One præocular; scales in 17 rows anteriorly; ventrals 140; subcaudals 51 . . . . . 2. *dorsalis*, p. 271.
- Two or three præoculars; scales in 19 rows; ventrals 118-121; subcaudals 36-41 . . . . . 3. *inornatus*, p. 272.

#### 1. *Pseudoxenodon macrops*.

*Tropidonotus macrops*, *Blyth, Journ. As. Soc. Beng.* xxiii. 1855, p. 296; *Günth. Rept. Brit. Ind.* p. 263 (1864); *Stoliczka, Journ. As. Soc. Beng.* xl. 1871, p. 436; *Theob. Cat. Rept. Brit. Ind.* p. 174 (1876).

— *angusticeps*, part., *Blyth, l. c.* p. 295; *W. L. Slater, Journ. As. Soc. Beng.* lx. 1891, p. 240.

*Xenodon macrophthalmus*, part., *Günth. Cat.* p. 58 (1858).

*Tropidonotus macrophthalmus*, part., *Günth. Rept. Brit. Ind.* p. 262, pl. xxii. fig. C.

— *macrophthalmus*, *Anders. Proc. Zool. Soc.* 1871, p. 77.

— *sikkimensis*, *Anders. Journ. As. Soc. Beng.* xl. 1871, p. 17.

*Pseudoxenodon macrops*, *Bouleng. Faun. Ind., Rept.* p. 340 (1890).

Rostral just visible from above; internasals shorter than the præfrontals; frontal once and one fourth to once and one third as long as broad, as long as or slightly shorter than its distance from the end of the snout, shorter than the parietals; loreal as long as

deep or deeper than long; one præocular; three postoculars; temporals 2+2; eight upper labials, fourth and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are a little shorter than the posterior. Scales more or less strongly keeled, in 19 rows anteriorly, in 17 on the middle of the body. Ventrals 158-173; anal divided; subcaudals 55-75. Brown or olive above, with or without a dorsal series of reddish-brown or orange spots and a dorso-lateral series of black spots; a more or less distinct chevron-shaped dark marking, pointing forwards, may be present on the nape; anterior part of belly with large quadrangular blackish-brown spots, posterior part and lower side of the tail clouded with brown.

Total length 990 millim.; tail 180.

Himalayas, Khasi Hills, hills of S.W. China and Burma.

a. ♀ (V. 164; C. 63).	Nepal.	B. H. Hodgson, Esq [P.].
b-d. ♂ (V. 173, 160; C. 73, 68) & ♀ (V. 165; C. 68).	Darjeeling.	T. C. Jerdon, Esq. [P.].
e-f. ♂ (V. 166; C. ?) & yg. (V. 160; C. 57).	Darjeeling.	W. T. Blanford, Esq. [P.].
g. ♀ (V. 172; C. ?).	Sikkim.	Mes-rs. v. Schlagin- tweit [C.].
h. ♀ (V. ca. 175; C. 69).	Sikkim.	Sir J. Hooker [P.].
i-k. ♂ (V. 164; C. ?) & ♀ (V. 167; C. 60).	Khasi Hills.	Sir J. Hooker [P.].
l. ♀ (V. 172; C. 65).	Khasi Hills.	(Types of <i>X. macrophthalmus.</i> ) T. C. Jerdon, Esq. [P.].
m-n. ♀ (V. 158, 158; C. ?, 55).	Kia-tiang-fu, Prov. Sze Chuen, 1070 feet.	A. E. Pratt, Esq. [C.].

## 2. *Pseudoxenodon dorsalis*. (PLATE XVII. fig. 2.)

*Xenodon macrophthalmus*, part., *Günth. Cat.* p. 53 (1858).

*Tridionotus dorsalis*, *Günth. Rept. Brit. Ind.* p. 263 (1864).

Rostral broader than deep, just visible from above; internasals a little shorter than the præfrontals; frontal a little longer than broad, as long as its distance from the end of the snout, shorter than the parietals; loreal deeper than long; one præ- and two or three postoculars; temporals 2+2; eight upper labials, fourth and fifth entering the eye; four lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales feebly keeled on the back, smooth on the sides, in 17 rows anteriorly, in 15 round the middle of the body. Ventrals 140; anal divided; subcaudals 51. Brownish grey above, with a dorsal series of pale yellowish (reddish) transverse spots; upper surface of tail with a yellowish, black-edged stripe; a  $\blacktriangle$ -shaped blackish band on the nape, confluent with a more indistinct one on the back of the head; a blackish band from the eye to the angle of the mouth; upper lip yellowish, the labials with fine black lines at the sutures;



belly yellowish, with large brown spots anteriorly, speckled with brown posteriorly; the outer ends of the ventrals blackish, forming a lateral stripe.

Total length 610 millim.; tail 115.

China.

a. ♀ (V. 140; C. 51). Chi Kiang. Mr. Fortune [C.]. (Type.)

### 3. *Pseudoxenodon inornatus*.

*Xenodon inornatus*, *Boie, Isis*, 1827, p. 541; *Schleg. Phys. Serp.* ii. p. 89, pl. iii. figs. 10 & 12 (1837); *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 319, and *Icon. Gén.* 19, pl. v. fig. 2 (1866).

Body stout. Rostral broader than deep, just visible from above; internasals shorter than the præfrontals; frontal a little longer than broad, as long as or longer than its distance from the end of the snout, a little shorter than the parietals; loreal deeper than long; two or three præ- and three postoculars; temporals 2+2 or 2+3; eight upper labials, fourth and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields; chin-shields broad and subequal in size. Scales in 19 rows, dorsals keeled, laterals smooth. Ventrals 118-121; anal divided; subcaudals 36-41. Olive-brown above; young with a  $\blacktriangle$ -shaped black band on the nape; yellowish or brownish below, speckled with dark brown; a light streak separates the belly from the flanks.

Total length 470 millim.; tail 70.

Java.

### 14. HELICOPS.

*Pseudoeryx*, part., *Fitzing. N. Class. Rept.* p. 29 (1826).

*Helicops*, part., *Wagler, Syst. Amph.* p. 170 (1830); *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 245.

*Tropidonotus*, part., *Schleg. Phys. Serp.* ii. p. 297 (1837); *Dum. & Bibr.* vii. p. 549 (1854).

*Homalopsis*, part., *Schleg. l. c.* p. 332.

*Helicops*, *Gray, Zool. Misc.* p. 64 (1842), and *Cat. Sn.* p. 71 (1849); *Dum. & Bibr. t. c.* p. 742; *Günth. Ann. & Mag. N. II.* (3) vii. 1861, p. 425; *Bouleng. Faun. Ind., Rept.* p. 352 (1890).

*Dimades*, part., *Gray, Zool. Misc.* p. 65.

*Uranops*, *Gray, Cat. Sn.* p. 68.

*Tachynectes*, *Gray, l. c.* p. 69.

*Tropidophis* (*non D. & B.*), *Gray, l. c.* p. 69.

*Myron*, part., *Gray, l. c.* p. 70.

*Atretium*, *Cope, Proc. Ac. Philad.* 1861, p. 299; *Günth. Rept. Brit. Ind.* p. 272 (1864).

*Linnophis*, *Günth. Ann. & Mag. N. II.* (3) xv. 1865, p. 96.

*Liodytes*, *Cope, Proc. Am. Philos. Soc.* xxii. 1885, p. 194, and *Proc. U.S. Nat. Mus.* xiv. 1892, p. 666.

Maxillary teeth 18 to 25, posterior longest; mandibular teeth subequal. Head not, or but slightly, distinct from neck; eye moderate or small, with round pupil; nostrils directed upwards, in a semidivided nasal; a single internasal. Body rather stout, cylin-

dricul; scales usually striated and keeled, sometimes smooth, without apical pits, in 19 to 25 rows; ventrals rounded. Tail moderate; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Florida and Mexico to South America; South-eastern Asia; Tropical Africa.

*Synopsis of the Species.*

I. Diameter of the eye more than half the length of the frontal shield; scales in 19 rows.

Scales keeled . . . . . 1. *schistosus*, p. 274.  
Scales smooth . . . . . 2. *bicolor*, p. 274.

II. Diameter of the eye not more than half the length of the frontal.

A. Scales on the body smooth or faintly keeled.

Scales in 19 rows; one præocular; rostral in contact with the inter-nasal . . . . . 3. *septemvittatus*, p. 275.  
Scales in 19 rows; one præocular; nasals in contact behind the rostral . . . . . 4. *allenii*, p. 275.  
Scales in 21 or 23 rows; two præoculars . . . . . 5. *trivittatus*, p. 276.

B. Scales on the back of the head smooth, on the body keeled, in 19 rows.

Frontal as long as or a little shorter than the parietals; ventrals 126-155; belly striped or spotted with black; a light stripe along the two lower rows of scales . . . . . 6. *carinicauda*, p. 276.

Frontal considerably shorter than the parietals; scales feebly keeled; ventrals 119-125; lower parts immaculate or with a few brown spots . . . . . 7. *modestus*, p. 277.

Frontal considerably shorter than the parietals; ventrals 118-131; belly spotted with black . . . . . 8. *leopardinus*, p. 278.

C. Scales on the occiput and back strongly keeled.

Scales in 19 rows . . . . . 9. *angulatus*, p. 278.  
Scales in 21 rows . . . . . 10. *scalaris*, p. 279.  
Scales in 23 or 25 rows . . . . . 11. *polylepis*, p. 280.

1. *Helicops schistosus*.

- Russell, Ind. Serp.* ii. pl. iv. (1801).  
*Coluber schistosus*, *Daud. Rept.* vii. p. 132 (1803).  
*Pseudoceryx schistosus*, *Fitzing. N. Class. Rept.* p. 55 (1826).  
*Tropidonotus dimidiatus*, *Boie, Isis*, 1827, p. 535.  
 — *schistosus*, *Schleg. Phys. Serp.* ii. p. 319 (1837); *Cantor, Cat. Mal. Rept.* p. 91 (1847); *Dum. & Bibr.* vii. p. 596 (1854).  
 — *moestus*, *Cantor, Proc. Zool. Soc.* 1839, p. 54.  
 — *surgens*, *Cantor, l. c.*  
*Tropidophis schistosus*, *Gray, Cat.* p. 69 (1849).  
*Atretium schistosum*, *Günth. Rept. Brit. Ind.* p. 273 (1864); *Theob. Cat. Rept. Brit. Ind.* p. 179 (1876).  
*Helicops schistosus*, *Jan, Elenco*, p. 76 (1863), and *Icon. Gén.* 28, pl. ii. fig. 3 (1868); *Bouleng. Faun. Ind., Rept.* p. 352 (1890).  
*Atretium schistosum*, var. *yunnanensis*, *Anders. An. Zool. Res. Yunnan*, p. 822 (1879).

Eye moderate; rostral just visible from above, forming a narrow suture with the internasal; frontal nearly twice as long as broad, much longer than its distance from the end of the snout, shorter than the parietals; loreal deeper than long; one præocular; two or three postoculars; temporals 2+2; eight or nine upper labials, third and fourth or fourth and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales more or less distinctly keeled, in 19 rows. Ventrals 129–151; anal divided; subcaudals 55–85. Olive-brown above, uniform or with two series of small black spots along the back; a more or less distinct dark lateral streak; upper lip, outer row of scales, and lower surfaces yellowish.

Total length 750 millim.; tail 180.

Southern India and Ceylon, Bengal, Burma, Yunnan, Malay Peninsula.

<i>a.</i> ♀ (V. 148; C. 68).	India.	Dr. P. Russell.
<i>b-d.</i> ♀ (V. 150, 151, 149; C. 69, 53, ?).	Madras.	T. C. Jerdon, Esq. [P.].
<i>e-f, g.</i> ♂ (V. 129; C. 67) & yg. (V. 137, 134; C. 55, 56).	Wynad.	Col. Beddome [C.].
<i>h.</i> Yg. (V. 132; C. 74).	Anamallays.	Col. Beddome [C.].
<i>i.</i> ♀ (V. 140; C. 67).	Ceylon.	R. Templeton, Esq. [P.].
<i>k.</i> ♀ (V. 142; C. 67).	Ceylon.	Sir E. Tennent [P.].
<i>l-m.</i> ♂ (V. 139, 138; C. 85, 82).	Ceylon.	
<i>n.</i> ♂ (V. 136; C. 77).	Pinang.	Dr. Cantor.

2. *Helicops bicolor*.

*Limnophis bicolor*, *Günth. Ann. & Mag. N. H.* (3) xv. 1865, p. 96, pl. ii. fig. C; *Bocage, Journ. Sc. Lisb.* i. 1866, p. 68; *Steindachn. Novara, Rept.* p. 67 (1869).

Eye moderate; rostral just visible from above, forming a narrow suture with the internasal; frontal nearly twice as long as broad, as long as or longer than its distance from the end of the snout,

shorter than the parietals; loreal trapezoid; one præ- and two postoculars; parietal in contact with the sixth labial; temporals 1+2; eight upper labials, third and fourth entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales perfectly smooth, in 19 rows. Ventrals 132-146; anal divided; subcaudals 45. Dark olive-brown, with two broad paler stripes; lower parts uniform yellow.

Total length 530 millim.; tail 100.

Angola.

a-b. ♀ (V. 146, 132; C. ♀, Duque de Bragance. Prof. Barboza du Bocado [P.]. (Types.) 45).

### 3. *Helicops septemvittatus*.

*Calopisma septemvittatum*, Fischer, *Verh. naturw. Ver. Hamb.* (2) iii. 1879, p. 84, pl. i. fig. 3.

*Limnophis septemvittatus*, Cope, *Proc. Am. Philos. Soc.* xxii. 1885, p. 177.

Eye rather small; rostral visible from above, forming a suture with the internasal; frontal nearly twice as long as broad, widening behind, longer than its distance from the end of the snout, shorter than the parietals; loreal deeper than long; one præ- and two postoculars; temporals 1+2; eight upper labials, fourth entering the eye; five lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales perfectly smooth, in 19 rows. Ventrals 122-130; anal divided; subcaudals 53-73. Brown above, with four black stripes; belly yellowish white, with three black stripes.

Total length 238 millim.; tail 73.

Mexico.

### 4. *Helicops allenii*.

*Helicops allenii*, Garman, *Proc. Bost. Soc. N. H.* xvii. 1874, p. 92, and *N. Am. Rept.* p. 34, pl. vii. fig. 4 (1883).

*Liodytes allenii*, Cope, *Proc. U.S. Nat. Mus.* xiv. 1892, p. 667.

Eye rather small, half the length of the frontal. Rostral broader than deep; nasals in contact behind the rostral; frontal once and two thirds to twice as long as broad, much longer than its distance from the end of the snout, shorter than the parietals; loreal trapezoid; one præ- and three postoculars; temporals 1+2; eight upper labials, third and fourth entering the eye; posterior chin-shields longer than the anterior. Scales in 19 rows, smooth or faintly keeled on the body, distinctly keeled on the tail. Ventrals 121-128; anal divided; subcaudals 58-63. Light reddish brown above, with a dark brown vertebral stripe five scales wide; a narrower dark brown stripe on each flank; upper lip and lower parts yellowish.

Total length 400 millim.; tail 110.

Florida.

a. ♂ (V. 121; C. 63). Lake Kerr, Florida. A. Erwin Brown, Esq. [P.].



5. *Helicops trivittatus*. (PLATE XVIII. fig. 2.)

*Myron trivittatus*, Gray, *Cat.* p. 70 (1849).

Eye small. Rostral much broader than deep, visible from above; nasals usually in contact behind the rostral; frontal about twice as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal deeper than long; two præ- and two or three postoculars; temporals 1+2; eight upper labials, fourth entering the eye; five lower labials in contact with the anterior chin-shields, which are nearly as long as the posterior. Scales faintly keeled, in 21 or 23 rows. Ventrals 120-130; anal divided; subcaudals 63-65. Coloration very much as in *Abastor erythrogrammus*. Dark olive above, with small black spots and five yellowish or reddish longitudinal streaks, outer widest; belly yellow or orange, with two regular longitudinal series of subcrescentic transverse black spots.

Total length 670 millim.; tail 190.

Brazil.

- |                                       |       |                             |
|---------------------------------------|-------|-----------------------------|
| a. ♀ (V. 126; C. 63).                 | — ?   | Zoological Society. (Type.) |
| b. ♂ (V. 120; C. ?).                  | — ?   | Zoological Society.         |
| c-d. Yg. (V. 130, 129;<br>C. 65, 65). | Para. | R. Graham, Esq. [P.].       |

6. *Helicops carinicauda*.

*Coluber carinicaudus*, Wied, *Beitr. Nat. Bras.* i. p. 300 (1825), and *Abbild.* (1825).

*Helicops carinicaudus*, *Wagl. Icon. Amph.* pl. vii. (1828); *Dum. & Bibr.* vii. p. 744 (1854); *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 252; *Hensel, Arch. f. Nat.* 1868, p. 329; *Bouleng. Ann. & Mag. N. H.* (5) xvi. 1885, p. 297, and xviii. 1886, p. 435.

*Homalopsis carinicaudus*, *Schleg. Phys. Serp.* ii. p. 350, pl. xiii. figs. 17 & 18 (1837).

*Helicops carinicaudus*, var. *gastrosticta*, *Jan, l. c.*

— *infrateniatus*, *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 245, and *Icon. Gén.* 28, pl. iii. fig. 3 (1868); *Cope, Proc. Am. Philos. Soc.* xxii. 1885, p. 193.

— *trivittatus*, *Cope, Proc. Am. Philos. Soc.* xvii. 1877, p. 92.

— *baliogaster*, *Cope, Proc. Am. Philos. Soc.* xxii. 1885, p. 193.

Eye small; rostral visible from above, forming a narrow suture with the internasal; frontal twice as long as broad, widening posteriorly, much longer than its distance from the end of the snout, as long as or a little shorter than the parietals; loreal deeper than long (rarely absent); one præ- and two postoculars; temporals 1+2 or 2+2; seven or eight upper labials, third or fourth (rarely third and fourth) entering the eye; four or five lower labials in contact with the anterior chin-shields, which are as long as or a little shorter than the posterior. Scales in 19 rows, feebly keeled anteriorly, strongly keeled on the posterior part of the body and on the tail; outer scales smooth. Ventrals 126-155; anal divided;

subcaudals 50-72. Dark olive-brown above, with four more or less distinct blackish stripes; a yellow stripe along the two lower rows of scales; yellow or red beneath, with black spots or stripes on the belly, and a black stripe on the tail.

Total length 1010 millim.; tail 180.

Brazil.

A. Belly with two regular longitudinal series of black spots.  
(*C. carinicaudus*, Wied.)

a. ♀ (V. 155; C. 54). Brazil. G. L. Conyngham, Esq.  
[P.].

B. Belly with three black stripes. (*H. infratemiatus*, Jan;  
*H. trivittatus*, Cope.)

b. ♀ (V. 135; C. 62). Rio Grande do Sul. Dr. H. v. Ihering [C.]

C. Belly checkered with black. (*H. baliojaster*, Cope.)

c. ♀ (V. 132; C. 70). Rio Grande do Sul. Dr. H. v. Ihering [C.]

D. Belly anteriorly as in B, posteriorly as in C.

d-e. ♂ (V. 132; C. 72) Rio Grande do Sul. Dr. H. v. Ihering [C.].  
& yg. (V. 132; C. 65).

### 7. *Helicops modestus*.

*Helicops carinicaudus* (non Wied), Gray, *Cat.* p. 71 (1849).

— *modestus*, Günth. *Ann. & Mag. N. H.* (3) vii. 1861, p. 425, fig.

? *Helicops leprieurii*, var. *moesta*, Jan, *Arch. Zool. Anat. Phys.* iii. 1865, p. 253.

*Helicops assimilis*, Reinh. *Vid. Meddel.* 1866, p. 151, fig.

Eye small; rostral visible from above, forming a narrow suture with the internasal; frontal twice as long as broad, much longer than its distance from the end of the snout, shorter than the parietals; loreal deeper than long, sometimes fused with the præocular; one or two præ- and two postoculars; temporals 1+2; seven or eight upper labials, third or fourth, or third and fourth, entering the eye; four or five lower labials in contact with the anterior chin-shields\*, which are as long as or a little shorter than the posterior. Scales in 19 rows, dorsals feebly keeled, laterals smooth. Ventrals 119-125; anal divided; subcaudals 43-67. Dark olive above, with three lighter stripes or with two blackish ones; belly yellowish white, uniform or with a few brown spots.

Total length 490 millim.; tail 95.

Brazil.

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\* The 3 pairs of chin-shields in the type specimen I regard as an anomaly, same as figured in a specimen of *Ichnognathus deKayi* by Dugès in 1838.

- a. ♀ (V. 125; C. 43). — ? Leyden Mus. (Type.)  
 b. ♀ (V. 123; C. 51). Lagoa Santa. Prof. Reinhardt [P.]  
 (One of the types of *H. assimilis*.)  
 c, d. ♀ (V. 122; C. 55) Porto Real, Prov. Rio M. Hardy du Dréneuf  
 & yg. (V. 119; C. 64). Janeiro. [C.]

### 8. *Helicops leopardinus*.

- Homalopsis leopardina*, Schleg. *Phys. Serp.* ii. p. 358 (1837).  
*Dimades leopardina*, Gray, *Zool. Misc.* p. 65 (1842).  
*Tachyneetes leopardina*, Gray, *Cat. Sn.* p. 69 (1849).  
*Helicops leprieurii*, Dum. & Bibr. vii. p. 750, pl. lxxviii. [Uranops  
 Sévère] (1854); *Günth. Ann. & Mag. N. H.* (3) vii. 1861, p. 427;  
*Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 253, and *Icon. Gén.* p. 28,  
 pl. iv. figs. 2 & 3 (1868).  
 — *leopardinus*, Jan, *l. cc.* p. 251, pl. iii. fig. 2.

Eye small; rostral visible from above, forming a narrow suture with the internasal; frontal nearly twice as long as broad, widening behind, longer than its distance from the end of the snout, shorter than the parietals; loreal deeper than long (rarely absent); one præ- and two postoculars; temporals 1 or 2+2 or 3; eight or nine upper labials, fourth or fourth and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are as long as the posterior. Scales in 19 rows (sometimes 21 on the nape), more or less strongly keeled, outer rows usually smooth or feebly keeled. Ventrals 118-131; anal divided; subcaudals 53-83. Dark olive or brown above, with four or five alternating series of black spots; a light streak from below the eye to the angle of the mouth, sometimes connected with its fellow by a light cross bar on the nape; lower parts checkered or cross-banded, black and yellow.

Total length 630 millim.; tail 160.

Guianas, Brazil.

- a. ♀ (V. 121; C. 66). Surinam. Lidth de Jeude Coll.  
 b. ♀ (V. 118; C. 69). Cayenne.  
 c, d. ♂ (V. 124; C. 70) Bahia. Dr. O. Wucherer [C].  
 & ♀ (V. 127; C. 58).  
 e-f, g. ♀ (V. 125, 131, 128; Bahia.  
 C. 53, 65, 63).

### 9. *Helicops angulatus*.

- Coluber angulatus*, Linn. *Mus. Ad. Frid.* p. 23, pl. xv. fig. 1 (1754),  
 and *S. N.* i. p. 377 (1766); *Daud. Rept.* vii. p. 209 (1803).  
 — *surinamensis*, Shaw, *Zool.* iii. p. 460 (1802).  
*Natrix aspera*, Wagl. in Spix, *Serp. Bras.* p. 37, pl. xiii. (1824).  
*Homalopsis angulata*, Schleg. *Phys. Serp.* ii. p. 351, pl. xiii. figs. 24  
 & 25 (1837).  
 — *Uranops angulatus*, Gray, *Cat.* p. 68 (1849).  
*Helicops angulatus*, Dum. & Bibr. vii. p. 746 (1854); *Günth. Ann.*  
 & *Mag. N. H.* (3) vii. 1861, p. 428; *Jan, Arch. Zool. Anat. Phys.*  
 iii. 1865, p. 251, and *Icon. Gén.* 28, pl. iv. fig. 1 (1868).

*Helicops cyclops*, Cope, *Proc. Ac. Philad.* 1863, p. 309.

? *Helicops fumigatus*, Cope, *l. c.* p. 308.

Eye small; rostral visible from above, usually in contact with the internasal; frontal once and a half to once and two thirds as long as broad, as long as or a little longer than its distance from the end of the snout, as long as or a little shorter than the parietals; loreal as long as deep or deeper than long; one præ- and two postoculars; temporals 1 or 2+2 or 3, posterior keeled; eight upper labials, fourth entering the eye; five or six lower labials in contact with the anterior chin-shields, which are as long as the posterior. Scales in 19 rows, strongly keeled even on the occiput and nape; outer row more or less distinctly keeled, rarely smooth. Ventrals 102-130; anal divided; subcaudals 61-94, keeled. Olive or grey-brown above, with more or less regular dark brown, black-edged cross bands, which narrow towards the sides, where they are usually confluent with the black cross bands of the belly; a large rhomboidal dark blotch on the nape; lower parts yellowish (in spirit) with large black spots, or, more usually, with regular black cross bands.

Total length 730 millim.; tail 200.

Tropical South America east of the Andes.

a. ♀ (V. 120; C. 61).	British Guiana.	
b-e, f-g. ♂ (V. 116, 117; C. 72, 73) & ♀ (V. 120, 120, 122, 130; C. 63, 65, 67, ?).	Demerara.	Mr. Snellgrove [C.].
h, i. ♂ (V. 113; C. 72) & ♀ (V. 120; C. 65).	Berbice.	
k. ♂ (V. 116; C. 94).	Para.	
l. Yg. (V. 118; C. ?).	Pernambuco.	W. A. Forbes, Esq. [P.].
m, n. ♀ (V. 114; C. 71) & vg. (V. 115; C. 83).	Upper Amazon.	
o. Hgr. (V. 102; C. 82).	Pebas.	H. W. Bates, Esq. [C.].
p-t. ♂ (V. 112; C. 73), ♀ (V. 114; C. 62), & vg. (V. 110, 111, 108; C. 77, 62, 76).	Moyobamba, N.E. Peru.	Mr. A. H. Roff [C.].
u. ♀ (V. 109; C. 72).	Sarayacu, N.E. Peru.	W. Davis, Esq. [C.]. Messrs. Veitch [P.].
v. Skull.	Santa Cruz, Brazil.	

#### 10. *Helicops scalaris*.

*Helicops scalaris*, Jan, *Arch. Zool. Anat. Phys.* iii. 1865, p. 250, and  
*Icon. Gén.* 28, pl. iii. fig. 1 (1868).

Eye small; rostral just visible from above and in contact with the internasal; frontal twice as long as broad, a little longer than its distance from the end of the snout, a little shorter than the parietals; loreal trapezoid; one præ- and two postoculars; temporals 2+3; nine upper labials, fourth or fourth and fifth entering



the eye; five lower labials in contact with the anterior chin-shields, which are as long as the posterior. Scales in 21 rows, all strongly keeled. Ventrals 116-120; anal divided; subcaudals 88. Grey above, with three longitudinal series of black spots, which are confluent into longitudinal streaks on the sides of the head and on the nape; the middle row of spots largest; ventrals grey, with a yellowish streak in the middle, or yellow with blackish spots.

Total length 410 millim.; tail 150. The specimen in the collection measures 350 millim. without the tail, which is injured.

Venezuela and Colombia.

a. ♂ (V. 116; C. ♀). Rosario de Cucuta, Colombia. Mr. Webber [C.].

### 11. *Helicops polylepis*.

*Helicops polylepis*, *Günth. Ann. & Mag. N. H.* (3) vii. 1861, p. 426.

*Tachynectes chrysoctictus*, *Cope, Proc. Ac. Philad.* 1862, p. 71.

*Helicops spixii*, *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 249, and *Icon. Gén.* 28, pl. ii. fig. 2 (1868).

Eye rather small; rostral visible from above, in contact with the internasal; frontal twice as long as broad, as long as or a little longer than its distance from the end of the snout, as long as or a little shorter than the parietals; loreal trapezoid; one præ- and two postoculars; temporals 2+2, 2+3, or 1+3; eight upper labials, fourth or third and fourth entering the eye; five or six lower labials in contact with the anterior chin-shields, which are as long as the posterior. Scales in 23 or 25 rows, all keeled, the keel on the outer row feeble. Ventrals 124-138; anal divided; subcaudals 76-84. Brownish or olive-grey above, with blackish spots disposed in five alternating rows, the middle ones largest; blackish beneath, with round yellow spots.

Total length 430 millim.; tail 130.

Brazil, North-eastern Peru.

a. ♂ (Sc. 25 (26); V. 133; Upper Amazon. (Type.)  
C. 82).

b. Hgr. (Sc. 23; V. 124; Peruvian Amazon. Mr. E. Bartlett [C.].  
C. 79).

### 15. *HYDRÆTHIOPS*.

*Hydræthiops*, *Günth. Ann. & Mag. N. H.* (4) ix. 1872, p. 28.

Maxillary teeth 20-22, increasing in size posteriorly; mandibular teeth decreasing in size posteriorly. Head slightly distinct from neck; eye small, with round pupil; nostrils directed upwards, pierced between two nasals; a single internasal. Body cylindrical; scales striated and keeled, with apical pits, in 23 rows; ventrals rounded. Tail moderate; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Tropical Africa.

1. *Hydræthiops melanogaster*.

*Hydræthiops melanogaster*, Günth. l. c. pl. iii. fig. G.

*Helicops marginatus*, Fischer, *Oster-Progr. Ak. Gymn. Hamb.* 1883, p. 11.

— *lineofasciatus*, Sauvage, *Bull. Soc. Zool. France*, 1884, p. 203, pl. vi. fig. 3.

Rostral as broad as deep, or a little broader, just visible from above and in contact with the internasal, which is triangular and longer than broad; frontal a little longer than broad, as long as its distance from the end of the snout, shorter than the parietals; loreal a little longer than deep; one præ- and two postoculars; temporals 1+2 or 1+3; ten or eleven upper labials, fifth and sixth or sixth and seventh entering the eye; three pairs of chin-shields, the anterior in contact with five lower labials. Scales more or less strongly keeled, in 23 rows. Ventrals 143-154; anal divided; subcaudals 39-49. Dark olive-brown above, with five more or less distinct series of alternating black spots; a yellowish stripe on each side, from the eye or the angle of the mouth along the first and second rows of scales; lower parts black.

Total length 610 millim.; tail 100.

West Africa.

- a-d. ♂ (V. 151; C. 48) & ♀ (V. 147, Gaboon. (Types.)  
151, 149; C. 41, 39, 41).  
e. ♀ (V. 143; C. 48). Cameroons.

## 16. TRETANORHINUS.

*Tretanorhinus*, Dum. & Bibr. *Erp. Gén.* vii. p. 348 (1854); Jan, *Arch. Zool. Anat. Phys.* iii. 1835, p. 254; Bocourt, *Le Naturaliste*, 1891, p. 121.

*Helicops*, part., Jan, l. c. p. 245.

Maxillary teeth about 30, subequal; mandibular teeth subequal. Head slightly distinct from neck; eye rather small, with round pupil; nostrils directed upwards, pierced between two nasals. Body cylindrical; scales striated and keeled, without apical pits, in 19 or 21 rows; ventrals rounded. Tail moderate; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Central America and Cuba.

*Synopsis of the Species.*

- Two præfrontals; posterior chin-shields separated from each other by scales; scales in 19 rows ..... 1. *variabilis*, p. 282.  
Two præfrontals; posterior chin-shields in contact with each other anteriorly; scales in 21 rows ..... 2. *nigroluteus*, p. 282.  
A single præfrontal; posterior chin-shields in contact with each other anteriorly; scales in 19 rows ..... 3. *mocquardii*, p. 283.

1. *Tretanorhinus variabilis*.

*Tretanorhinus variabilis*, part., *Dum. & Bibr.* vii. p. 349, pl. lxxx. fig. 4 (1854); *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 254; *Gundlach, Erp. Cub.* p. 80 (1880).

*Tropidonotus cubanus*, *Gundlach, Mon. Berl. Ac.* 1861, p. 1001, and *l. c.* p. 81.

*Tretanorhinus variabilis*, *Cope, Proc. Ac. Philad.* 1861, p. 298, and 1868, p. 309; *Bocourt, Le Natur.* 1891, p. 122.

*Helicops wagleri*, *Jan, l. c.* p. 247, and *Icon. Gén.* 28, pl. i. fig. 1 (1868).

*Tretanorhinus variabilis*, var. *adnexus*, *Jan, l. c.*; *Bocourt, l. c.* p. 208.

*Helicops variabilis*, part., *Garman, N. Am. Rept.* p. 33 (1883).

Head narrow and elongate; eye rather small; nasals in contact with each other behind the rostral, or narrowly separated; internasals small, longer than broad; frontal as long as its distance from the end of the snout, shorter than the parietals; loreal elongate; one or two præ- and two postoculars; temporals 1+2; eight upper labials, fourth entering the eye; four or five lower labials in contact with the anterior chin-shields; posterior chin-shields a little longer than the anterior and separated from each other by scales. Scales in 19 rows, keeled, the keels strongest on the tail. Ventrals 131-164; anal divided; subcaudals 50-78. Olive or blackish above, with or without blackish cross bands; a more or less distinct light lateral streak on the second and third rows of scales; a dark streak on each side of the head, passing through the eye; belly orange or red, dotted or spotted all over with brown, or brown dotted with paler.

Total length 660 millim; tail 160.

Cuba.

a-b. ♂ (V. 160, 158; C. 69, 68).

Cuba.

c. ♂ (V. 155; C. 68).

Cuba.

Prof. Peters [P.].

2. *Tretanorhinus nigroluteus*.

*Tretanorhinus variabilis*, part., *Dum. & Bibr.* vii. p. 349 (1854);

*Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 254.

— *nigroluteus*, *Cope, Proc. Ac. Philad.* 1861, p. 298, and 1868, p. 309; *Günth. Ann. & Mag. N. H.* (4) ix. 1872, p. 27; *Cope, Proc. Am. Philos. Soc.* xxii. 1885, p. 183; *Bocourt, Le Natur.* 1891, p. 122.

*Helicops agassizii*, *Jan, l. c.* p. 248, and *Icon. Gén.* p. 28, pl. ii. fig. 1 (1868).

— *variabilis*, part., *Garman, N. Am. Rept.* p. 33 (1883).

— *nigroluteus*, *Garm. l. c.* p. 144.

— *bifrenatus*, *Bocourt, Bull. Soc. Philom.* (7) viii. 1884, p. 194.

*Regina nigrolutea*, *Cope, Bull. U.S. Nat. Mus.* no. 32, 1887, p. 74.

*Tretanorhinus lateralis*, *Bocourt, l. c.*

Very closely allied to the preceding, but differing in the following points:—Usually two loreals, anterior smallest; two or three præoculars; posterior chin-shields in contact with each other anteriorly; scales in 21 rows. Olive or blackish above, uniform or

with small black spots; a dark streak on each side of the head, passing through the eye; a yellow lateral streak, edged with dark below, on the anterior portion of the body, posteriorly confluent with the yellow of the ventral region; yellow below, uniform or with dark brown spots or dots.

Total length 680 millim.; tail 160.

Central America.

*a, b, c.* ♀ (V. 146, 149; C. 63, 64) Panama. Zoological Society.  
& yg. (V. 134; C. 76).

### 3. *Tretanorhinus mocquardii*.

*Tretanorhinus mocquardi*, *Bocourt, Le Natur.* 1891, p. 122.

A single præfrontal; a single loreal; two præoculars; anterior chin-shields in contact with each other anteriorly. Scales in 19 rows. A yellow stripe along the flanks; lower parts fuliginous yellow.

Central America.

## 17. OPISTHOTROPIS.

*Opisthotropis*, *Günth. Ann. & Mag. N. H.* (4) ix. 1872, p. 16;

*Bouleng. Ann. & Mag. N. H.* (6) vii. 1891, p. 343.

*Calamohydus*, *Bouleng. Ann. & Mag. N. H.* (6) ii. 1888, p. 43.

*Helicopsoides*, *Mocquard, Le Naturaliste*, 1890, p. 154, and *Nouv. Arch. Mus.* (3) ii. 1890, p. 141, and *Mém. Soc. Zool. Fr.* v. 1892, p. 203.

*Lepidognathus*, v. *Lidth de Jeude*, in *M. Weber, Zool. Ergebn.* ii. p. 186 (1890).

Maxillary teeth small, equal, 20 to 25; mandibular teeth small, equal. Head small, not distinct from neck; eye small, with round pupil; nostril directed upwards, in a divided or semidivided nasal. Body cylindrical; scales finely striated and keeled, without apical pits, in 17 or 19 rows; ventrals rounded. Tail moderate; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

West Africa; Southern China; Malay Archipelago.

### *Synopsis of the Species.*

I. Scales in 17 rows; nasals separated by the internasals.

- |  |                                |
|--|--------------------------------|
| Præfrontal single; eight upper labials, fifth entering the eye . . . . . | 1. <i>atru</i> , p. 284.       |
| Præfrontal single; eight upper labials, none entering the eye . . . . .  | 2. <i>andersonii</i> , p. 284. |
| Two præfrontals; twelve upper labials, none entering the eye . . . . .   | 3. <i>rugosa</i> , p. 284.     |

II. Scales in 19 rows; nasals in contact behind the rostral.

- |                            |
|----------------------------|
| 4. <i>typica</i> , p. 285. |
|----------------------------|



1. *Opisthotropis atra*.

*Opisthotropis atra*, Günth. *Ann. & Mag. N. H.* (4) ix. 1872, p. 16, pl. iii. fig. B.

Snout short and broad, much depressed, not projecting. Rostral much broader than deep, well visible from above; internasals a little longer than broad; præfrontal single; frontal large, as broad as long, thrice as broad as the supraocular, shorter than the parietals; loreal a little longer than deep; one præ- and two postoculars; a very elongate anterior temporal; eight upper labials, fifth entering the eye, seventh very long; two pairs of subequal chin-shields, anterior in contact with five labials. Scales in 17 rows, smooth on the nape, feebly keeled on the body, rather strongly keeled towards the tail. Ventrals 170; anal divided; subcaudals 65. Upper parts brownish black, lighter towards and on the abdomen.

Total length 340 millim.; tail 75.

West Africa.

a. ♂ (V. 170; C. 65). W. Africa. (Type.)

2. *Opisthotropis andersonii*. (PLATE XVIII. fig. 3.)

*Calamohydus andersonii*, Bouleng. *Ann. & Mag. N. H.* (6) ii. 1888, p. 44.

*Opisthotropis andersonii*, Bouleng. *Ann. & Mag. N. H.* (6) vii. 1891, p. 343.

Snout short and broad, much depressed, not projecting. Rostral much broader than deep, just visible from above; internasals twice as long as broad; nasal cleft extending from the nostril to the second labial; a single præfrontal; frontal large, a little longer than broad, much shorter than the parietals; loreal much longer than deep; one præ- and one postocular; two small suboculars, separating the eye from the labials; temporals 1+2; eight upper labials, fifth below the eye; only one pair of well-developed chin-shields, in contact with four labials. Scales in 17 rows, finely striated and feebly keeled. Ventrals 161; anal divided; subcaudals 58. Blackish olive above, each scale edged with whitish; lower parts whitish, chin and lower labials brown.

Total length 240 millim.; tail 45.

Hong Kong.

a. ♂ (V. 161; C. 58). Hong Kong. City Hall Museum, Hong Kong [E.]. (Type.)

3. *Opisthotropis rugosa*.

*Lepidognathus rugosus*, v. Lidth de Jeude, in *M. Weber, Zool. Ergebn.* ii. p. 187, pl. xvi. figs. 1-5 (1890).

*Opisthotropis rugosa*, Bouleng. *Ann. & Mag. N. H.* (6) vii. 1891, p. 343.

Rostral as deep as broad; internasals suberescenscentic, forming together a triangle; two prefrontals; frontal as broad as long; one pre- and one postocular, and three suboculars separating the eye from the labials; twelve upper labials, third to tenth separated from the edge of the mouth by a row of small trigonal scales. Scales in 17 rows, striated and strongly keeled. Ventrals 170; anal divided; subcaudals 95. Olive above, the scales with a whitish edge; lower parts and outer row of scales yellow.

Kaju Tanam, Sunatra.

#### 4. *Opisthotropis typica*.

*Helicopsoides typicus*, *Mocquard, Le Natur.* 1890, p. 154, and *Nouv. Arch. Mus.* (3) ii. 1890, p. 141, pl. ix. fig. 3.

*Opisthotropis typica*, *Bouleng. Ann. & Mag. N. H.* (6) vii. 1891, p. 343.

Snout short and broad, much depressed. Rostral twice as broad as deep; nasals semidivided, in contact behind the rostral; internasals small, triangular; a pair of prefrontals; frontal large, pentagonal, as long as broad; supraocular very small; loreal elongate, partly or completely divided; two pre- and two postoculars; three suboculars separating the eye from the labials; temporals 1+1+2; eleven upper labials, seventh and eighth below the eye, the six anterior twice as deep as long, the four last divided as in the preceding species. Scales in 19 rows, striated and keeled. Ventrals 176; anal divided; subcaudals 82. Uniform olive-brown above, dirty yellow below.

Total length 390 millim.; tail 95.

Mt. Kina Baloo, North Borneo.

### 18. ISCHNOGNATHUS.

*Ischnognathus*, *Dum. & Bibr. Mém. Ac. Sc.* xxiii. 1853, p. 468, and *Erp. Gén.* vii. p. 506 (1854); *Günth. Cat. Col. Sn.* p. 80 (1858); *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 238.

*Storeria*, *Baird & Gir. Cat. N. Am. Rept.* p. 135 (1853).

*Microps (non Meyerle)*, *Hallow. Proc. Ac. Philad.* 1856, p. 240.

*Tropidocelonion*, *Cope, Proc. Ac. Philad.* 1860, p. 76, and *Proc. U.S. Nat. Mus.* xiv. 1892, p. 666.

*Cora*, *Jan, l. c.*

*Adelophis (Dugès)*, *Cope, Proc. Am. Philos. Soc.* xviii. 1879, p. 265.

*Clonophis*, *Cope, Proc. U.S. Nat. Mus.* xi. 1889, p. 391.

Maxillary teeth 14 to 18, equal; mandibular teeth equal. Head slightly distinct from neck; eye rather small, with round pupil; loreal shield present or absent. Body moderately elongate, cylindrical; scales keeled, with or without apical pits, in 15 to 19 rows; ventrals rounded. Tail moderate; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

North and Central America.

*Synopsis of the Species.*

## I. Anal divided.

- Scales in 19 rows; a loreal and one præocular . . . . . 1. *kirtlandii*, p. 286.  
 Scales in 17 rows; præocular one, in contact with nasal . . . . . 2. *dekayi*, p. 286.  
 Scales in 15 rows; præoculars two, in contact with nasal . . . . . 3. *occipitomaculatus*, p. 287.  
 Scales in 15 rows; a loreal and two præoculars . . . . . 4. *storerioides*, p. 288.

## II. Anal entire.

- Scales in 15 rows; no loreal . . . . . 5. *copii*, p. 289.  
 Scales in 17 or 19 rows; a loreal .. 6. *lineatus*, p. 289.

1. *Ischnognathus kirtlandii*.

*Regina kirtlandii*, Kennicott, *Proc. Ac. Philad.* 1856, p. 95; *H. Garm. Bull. Illin. Lab.* iii. 1892, p. 275.

*Tropidoclonion kirtlandii*, Cope, *Proc. Ac. Philad.* 1860, p. 340.

*Ischnognathus kirtlandii*, Jan, *Arch. Zool. Anat. Phys.* iii. 1865, p. 239, and *Icon. Gén.* 30, pl. i. fig. 1 (1868).

*Tropidonotus kirtlandii*, Garm. *N. Am. Rept.* p. 28, pl. i. fig. 3 (1883).

*Clonophis kirtlandii*, Cope, *Proc. U.S. Nat. Mus.* xi. 1889, p. 391.

Rostral broader than deep, just visible from above; nasal divided; a loreal; internasals broader than long; frontal once and a half as long as broad, longer than its distance from the end of the snout, shorter than the parietals; one præ- and two postoculars; temporals 1+1 or 1+2; six (exceptionally five) upper labials, third and fourth (or second and third) entering the eye; two pairs of chin-shields, posterior separated from each other. Scales in 19 rows, all very strongly keeled. Ventrals 129-133; anal divided; subcaudals 50-59. Greyish brown above, on each side with a series of large black spots and alternating series of smaller spots; head dark brown, with lighter vermiculations; labials yellowish; ventrals yellowish, with a black spot at each outer end.

Total length 430 millim.; tail 90.

United States, from Illinois to Ohio.

*a-b.* ♀ (V. 129, 133; C. 51, ?). Illinois. Prof. S. A. Forbes [P.].

2. *Ischnognathus dekayi*.

*Coluber ordinatus (non L.)*, Storer, *Rep. Fish. & Rept. Mass.* p. 223 (1839).

*Tropidonotus dekayi*, Holbr. *N. Am. Herp.* iv. p. 53, pl. xiv. (1842); *Dekay, N. York Faun., Rept.* p. 46, pl. xiv. fig. 30 (1842).

*Ischnognathus dekayi*, Dum. & Bibr. *Mém. Ac. Sc.* xxiii. 1853, p. 468; *Günth. Cat.* p. 81 (1858); Jan, *Arch. Zool. Anat. Phys.* iii. 1865, p. 240, and *Icon. Gén.* 30, pl. i. figs. 3 & 4 (1868).

*Storeria dekayi*, *Baird & Gir. Cat. N. Am. Rept.* p. 135 (1853); *Garm. N. Am. Rept.* p. 31, pl. i. fig. 1 (1883), and *Bull. Essex Inst.* xxiv. 1892, p. 105; *H. Garm. Bull. Illin. Lab.* iii. 1892, p. 278.

*Ischnognathus dekayi*, part., *Dum. & Bibr.* vii. p. 507 (1854).

*Storeria tropica*, *Cope, Proc. Am. Philos. Soc.* xxii. 1885, p. 175.

— *dekayi*, var. *anomala*, *Dugès, Proc. U.S. Nat. Mus.* xi. 1888, p. 9, fig.

Rostral broader than deep, visible from above; nasal divided, in contact with the præocular; internasals broader than long, much shorter than the præfrontals; frontal about once and a half as long as broad, longer than its distance from the end of the snout, shorter than the parietals; one (rare two) præ- and two post-oculars; temporals 1+1 or 1+2; seven (rarely six) upper labials, third and fourth entering the eye; four lower labials in contact with the anterior chin-shields; posterior chin-shields as long as the anterior and usually in contact with each other in front. Scales in 17 rows, all keeled. Ventrals 120–145; anal divided; subcaudals 40–63. Pale olive-brown, greyish or reddish above, with or without a lighter vertebral stripe and two dorsal series of small black spots; crown of head often blackish; a blackish transverse blotch on each side of the nape; frequently a black spot below the eye; ventrals yellowish, usually with black dots on the sides.

Total length 370 millim.; tail 75.

North and Central America, from Canada to Guatemala.

<i>a.</i> ♀ (V. 127; C. 48).	Canada.	Chatham Museum [P.].
<i>b-d.</i> ♀ (V. 128, 125; C. 40, ?) & hgr. (V. 120; C. 43).	Bloomington, Indiana.	C. Bollman, Esq. [C.].
<i>e.</i> ♀ (V. 138; C. 46).	Illinois.	Smithsonian Instit. [P.].
<i>f.</i> ♂ (V. 135; C. 63).	New Orleans.	M. Sallé [C.].
<i>g-k.</i> ♂ (V. 126; C. 51) & ♀ (V. 137, 137, 139; C. 50, 51, 47).	Texas.	
<i>l, m.</i> ♂ (V. 136; C. 55) & ♀ (V. 132; C. 56).	Duval Co., Texas.	W. Taylor, Esq. [C.].
<i>n.</i> ♀ (V. 136; C. 47).	Guatemala.	O. Salvia, Esq. [C.].

### 3. *Ischnognathus occipitomaculatus*.

*Coluber occipitomaculatus*, *Storer, Rep. Fish. & Rept. Mass.* p. 230 (1839).

— *venustus*, *Hallow. Proc. Ac. Philad.* 1847, p. 278, pl. —, and 1849, p. 245.

*Storeria occipitomaculata*, *Baird & Gir. Cat. N. Am. Rept.* p. 137 (1853); *Baird, Serp. of N. York*, p. 26 (1854); *Garm. N. Am. Rept.* p. 30, pl. i. fig. 2 (1883); *H. Garm. Bull. Illin. Lab.* iii. 1892, p. 278.

*Ischnognathus dekayi*, part., *Dum. & Bibr.* vii. p. 507 (1854).

— *occipitomaculatus*, *Günth. Cat.* p. 81 (1858); *Jan, Arch. Zool. Anat. Phys.* iii. 1865, p. 240, and *Icon. Gén.* 30, pl. i. fig. 2 (1868).



Rostral broader than deep, visible from above; nasal divided or semidivided, in contact with the præoculars; internasals broader than long, shorter than the præfrontals; frontal about once and a half as long as broad, longer than its distance from the end of the snout, shorter than the parietals; two præ- and two postoculars; temporals 1+2; six upper labials, third and fourth entering the eye; four lower labials in contact with the anterior chin-shields; posterior chin-shields shorter than the anterior and in contact with each other. Scales in 15 rows, all keeled. Ventrals 110-128; anal divided; subcaudals 38-52. Olive-brown above, usually with a lighter vertebral stripe bordered by two series of dark dots or by two dark brown lines; a more or less distinct dark lateral line, below which the sides and the outer ends of the ventrals are speckled or vermiculate with black; three yellow spots behind the shielded part of the head; belly yellowish or coral-red in the middle.

Total length 320 millim.; tail 60.

Canada and United States, east of the Rocky Mountains.

- a. Hgr. (V. 125; C. 38). Nova Scotia. J. M. Jones, Esq. [P.]  
 b-d, e, f. ♀ (V. 125, 127, 128; N. America.  
 C. 39, 42, 43) & hgr. (V. 119,  
 110; C. 50, 50).

#### 4. *Ischnognathus storerioides*.

*Tropidoclonium storerioides*, Cope, *Proc. Ac. Philad.* 1865, p. 190.

*Storeria storerioides*, Garm. *N. Am. Rept.* p. 29 (1883).

*Natrix storerioides*, Cope, *Proc. U.S. Nat. Mus.* xi. 1889, p. 391.

Rostral just visible from above; nasal semidivided or completely divided; loreal present, sometimes entering the eye; internasals broader than long, shorter than the præfrontals; frontal once and a half as long as broad, a little longer than its distance from the end of the snout, shorter than the parietals; two præ- and two or three postoculars; temporals 1+2; six or seven upper labials, third and fourth entering the eye; three or four lower labials in contact with the anterior chin-shields; posterior chin-shields separated from each other or in contact anteriorly. Scales in 15 rows, outer row smooth. Ventrals 120-135; anal divided; subcaudals 37-51. Olive-brown, reddish or blackish above, with small black spots; vertebral region occasionally somewhat lighter and crossed by narrow black lines; a blackish blotch, bifid posteriorly, on the back of the head; grey or reddish beneath, sides usually speckled with black.

Total length 340 millim.; tail 65.

Mexico.

- a. ♀ (V. 129; C. 41). Plateau of Mexico. Mr. Doorman [P.]  
 b-c, d-i. ♂ (V. 128, 133; La Cumbe de los Arra- Dr. A. C. Buller  
 C. 42, 45), ♀ (V. 130, strados, Talpa, Jalisco, [C.]  
 133, 134, 130, 131; C. co, 8500 ft.  
 41, 38, 38, 41, 38), &  
 yg. (V. 135; C. 40).

- k-l.* ♂ (V. 126; C. 46) & Colonia Brizuela, Hacienda el Rosario, Autlan, Jalisco. Dr. A. C. Buller [C.].  
 ♀ (V. 130; C. 37).
- m-o.* ♂ (V. 127, 133, 120; C. 51, 47, 48). Hacienda Sta Gertrudio, Mascota, Jalisco. Dr. A. C. Buller [C.].

### 5. *Ischnognathus copeii*.

*Adelophis copeii* (Dugès), *Cope, Proc. Am. Philos. Soc.* xviii. 1879, p. 265; *Dugès, La Natureza*, (2) i. 1837, p. 18, pl. iii. fig. 1.  
*Storeria copeii*, *Garm. N. Am. Rept.* p. 31 (1883).

Snout rather pointed; nasals distinct, separated from the præocular by the præfrontal; no loreal; internasals small, triangular; frontal much longer than broad; one præ- and two postoculars; temporals 1+2; five upper labials, third and fourth entering the eye; two pairs of chin-shields, posterior in contact with each other. Scales in 15 rows, outer row smooth. Anal entire. A broad brown, black-edged dorsal band with a yellow vertebral line; flanks and belly light brown.

Total length 330 millim.; tail 66.

Guadalajara, Mexico.

### 6. *Ischnognathus lineatus*.

*Microps lineatus*, *Hallow. Proc. Ac. Philad.* 1856, p. 241; *Baird, Rep. U.S. Explor. R. R.* x. pt. iii. pl. xxxiv. fig. 6 (1859).

*Tropidoclonion lineatum*, *Cope, Proc. Ac. Philad.* 1860, p. 76; *H. Garm. Bull. Illin. Lab.* iii. 1891, p. 187; *Stejneger, Proc. U.S. Nat. Mus.* xiv. 1891, p. 504.

*Storeria lineata*, *Garm. N. Am. Rept.* p. 32, pl. i. fig. 4 (1883).

*Tropidoclonium lineatum iowæ*, *Call, Am. Journ. Sc. & Art.* (3) xli. 1891, p. 298.

Rostral small, a little broader than deep; nasal semidivided; loreal present, elongate, low; internasals broader than long, shorter than the præfrontals; frontal once and a half as long as broad, longer than its distance from the end of the snout, much shorter than the parietals; one præ- and two postoculars; temporals 1+1 or 1+2; five or six upper labials, third, or third and fourth, entering the eye; posterior chin-shields very short and in contact in front. Scales in 17 or 19 rows, strongly keeled, the two outer rows smooth or faintly keeled. Ventrals 138-150; anal entire; subcaudals 32-36. Light greyish brown above, with a pale yellowish or grey vertebral stripe; the vertebral stripe bordered on each side by a series of black dots; a white lateral stripe along the second and third rows of scales; belly white, with two longitudinal series of black spots.

Total length 250 millim.; tail 35. Grows to 360 millim.

United States, east of the Rocky Mountains and west of Ohio and Mississippi.

- a. ♀ (Sc. 19; V. 138; St. Louis, Missouri. Dr. S. Garman [P.].  
C. 36).
- b. ♀ (Sc. 19; V. 138; St. Louis, Missouri. A. Erwin Brown,  
C. 36). Esq. [P.].

### 19. AMPHIARDIS.

*Amphiardis*, Cope, *Proc. U.S. Nat. Mus.* xi. 1888, p. 391, and xiv. 1891, p. 675.

Teeth equal. Head small, not distinct from neck; eye small, with round pupil; no præocular; loreal and præfrontal entering the eye. Body cylindrical; scales keeled, in 17 rows; ventrals rounded. Tail short; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Texas.

This genus appears to be intermediate between *Ischnognathus* and *Haldea*, agreeing with the former in having two internasals, with the latter in the absence of præocular.

#### 1. *Amphiardis inornatus*.

Virginia *inornata*, Garman, *N. Am. Rept.* p. 97 (1883).  
*Amphiardis inornatus*, Cope, *ll. cc.*

Head subconical; snout short, blunt. Rostral very small, not reaching the top of the head; loreal elongate; one postocular; temporals 1+1; five upper labials, third and fourth entering the eye; posterior chin-shields half as long as the anterior. Scales keeled, lustrous, in 17 rows, outer row faintly keeled. Ventrals 125-129; anal divided; subcaudals 36. Uniform brownish olive above, whitish beneath.

Total length 260 millim.; tail 45.

Near Dallas, Texas.

### 20. HALDEA.

Calamaria, part., Schleg. *Phys. Serp.* ii. p. 25 (1837).

Conocephalus (*non Thumb.*), Dum. & Bibr. *Mém. Ac. Sc.* xxiii. 1853, p. 442, and *Erp. Gén.* vii. p. 138 (1854); Günth. *Cat. Col. Sn.* p. 17 (1858); Jan, *Arch. Zool. Anat. Phys.* ii. 1862, p. 24; Bocourt, *Miss. Sc. Mex., Rept.* p. 541 (1883).

*Haldea*, Baird & Gir. *Cat. N. Am. Rept.* p. 122 (1853).

Falconeria, Theob. *Cat. Rept. As. Soc. Mus.* p. 44 (1863).

Potamophis, Garman, *Bull. Essex Inst.* xxiv. 1892, p. 105.

Maxillary teeth very small, subequal, 16 to 18; anterior mandibular teeth a little larger than the posterior. Head small, not distinct from neck; eye small, with round pupil; a single internasal; no præocular, loreal and præfrontal entering the eye. Body cylindrical; scales keeled, without apical pits, in 17 rows; ventrals rounded. Tail short; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

North America.

1. *Haldea striatula*.

- Coluber striatulus*, Linn. *S. N.* i. p. 375 (1766); *Daud. Rept.* vii. p. 200 (1803); *Harlan, Journ. Ac. Philad.* v. 1827, p. 354, and *Med. Phys. Res.* p. 117 (1835).
- Calamaria striatula*, Schleg. *Phys. Serp.* ii. p. 43 (1837); *Holbr. N. Am. Herp.* iii. p. 123, pl. xxix. (1842).
- Conocephalus striatulus*, Dum. & Bibr. *Mém. Ac. Sc.* xxiii. 1853, p. 442, and *Erp. Gén.* vii. p. 140 (1854); *Günth. Cat.* p. 17 (1858); *Jan, Icon. Gén.* 12, pl. iii. fig. 1 (1865); *Bocourt, Miss. Sc. Mex., Rept.* p. 541, pl. xxxii. fig. 5 (1883); *Bouleng. Faun. Ind., Rept.* p. 279 (1890).
- Haldea striatula*, Baird & Gir. *Cat. N. Am. Rept.* p. 122 (1853); *H. Garm. Bull. Illin. Lab.* iii. 1892, p. 306.
- Falconeria bengalensis*, Theob. *Cat. Rept. As. Soc. Mus.* p. 44 (1868), and *Cat. Rept. Brit. Ind.* p. 145 (1876).
- Virginia striatula*, Garm. *N. Am. Rept.* p. 97, pl. vii. fig. 2 (1883).
- Potamophis striatula*, Garm. *Bull. Essex Inst.* xxiv. 1892, p. 105.
- ? *Potamophis inornatus*, Garm. *l. c.*

Snout obtusely pointed. Rostral small, nearly as deep as broad; internasal small, nearly twice as broad as long; frontal about once and a half as long as broad, as long as or a little longer than its distance from the end of the snout; loreal at least three times as long as deep; one postocular; temporals 1+1 or 1+2; five (or four) upper labials, third and fourth (or second and third) entering the eye; four lower labials in contact with the anterior chin-shields, which are much longer than the posterior. Scales keeled, in 17 rows. Ventrals 114-135; anal single (rarely divided); subcaudals 36-50, the anterior sometimes single. Brown above, yellowish (salmon-red) inferiorly.

Total length 250 millim.; tail 42.

Texas, Mississippi Valley and eastwards.

- a-b. ♂ (V. 121, 118; Pensacola, Florida. C. Bollman, Esq. [C.]  
C. 42, 41).
- c. ♀ (V. 128; C. 40). New Orleans.

## 21. STREPTOPHORUS.

- Streptophorus*, Dum. & Bibr. *Mém. Ac. Sc.* xxiii. 1853, p. 468, and *Erp. Gén.* vii. p. 514 (1854); *Günth. Cat. Col. Sn.* p. 16 (1858); *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 25; *Bocourt, Miss. Sc. Mex., Rept.* p. 544 (1883).
- Ninia*, Baird & Gir. *Cat. N. Am. Rept.* p. 49 (1853); *Cope, Proc. Ac. Philad.* 1860, p. 339; *Peters, Sitzb. Ges. naturf. Fr.* 1881, p. 49.

Maxillary teeth small, equal, 15 to 18; mandibular teeth equal. Head small, more or less distinct from neck; eye small, with vertically subelliptical pupil; posterior nasal concave; no præocular\*; loreal and usually præfrontal entering the eye. Body moderate,

\* One or two minute præoculars are present in a few specimens.



cylindrical; scales striated and keeled, with apical pits, in 19 rows; ventrals rounded. Tail moderate or rather long; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Central America; North-western South America.

*Synopsis of the Species.*

Subcaudals 75-101; five or six upper labials .....	1. <i>diadematus</i> , p. 292.
Subcaudals 100; seven upper labials, posterior keeled .....	2. <i>labiosus</i> , p. 293.
Subcaudals 37-67; seven or eight upper labials .....	3. <i>atratus</i> , p. 293.

1. *Streptophorus diadematus*.

*Ninia diademata*, Baird & Gir. *Cat. N. Am. Rept.* p. 49 (1853); *Cope, Proc. Ac. Philad.* 1860, p. 340.

*Streptophorus bifasciatus*, Dum. & Bibr. vii. p. 520 (1854); *Günth. Cat.* p. 16 (1858); *Cope, Proc. Ac. Philad.* 1860, p. 77; *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 26, and *Icon. Gén.* 12, pl. iii. fig. 3 (1865); *Bocourt, Miss. Sc. Mex., Rept.* p. 545, pl. xxxii. fig. 10 (1883).

Rostral about once and a half as broad as deep, visible from above; internasals and supraoculars small; frontal as broad as long, as long as its distance from the end of the snout, shorter than the parietals; loreal once and a half to twice as long as deep; two postoculars; temporals 1+2 or 2+3; six (exceptionally five) upper labials, third and fourth entering the eye, sixth longest; four lower labials in contact with the anterior chin-shields; posterior chin-shields small. Scales in 19 rows, all strongly keeled. Ventrals 136-156; anal entire; subcaudals 75-101. Dark brown or blackish grey above, usually with a light spot on each of the outer scales; upper lip and occiput yellowish; the yellowish collar may be interrupted in the median line; belly and lower surface of tail yellowish, with three longitudinal series of large black spots, or black with a light border to each shield.

Total length 415 millim.; tail 125.

Mexico.

a. ♀ (V. 142; C. 83).	Mexico.	M. Sallé [C.].
b-c. ♂ (V. 140, 148; C. 96, 101) & ♀ (V. 156, 150; C. 84, 75).	Huatuzco, Vera Cruz.	F. D. Godman & O. Salvin, Esqrs. [P.].
f. Hgr. ♀ (V. 137; C. 92).	Teapa, Tabasco.	Mr. H. H. Smith [C.]. F. D. Godman & O. Salvin, Esqrs. [P.].
g-h. Hgr. ♂ (V. 140, 147; C. 87, 97).	Oaxaca.	Mr. Hoege [C.].

2. *Streptophorus labiosus*.

*Streptophorus labiosus*, *Bocourt, Miss. Sc. Mex., Rept.* p. 550, pl. xxxii. fig. 6 (1883).

*Ninia labiosa*, *Cope, Bull. U.S. Nat. Mus.* no. 32, 1887, p. 75.

Rostral about once and a half as broad as deep, visible from above; frontal as broad as long, as long as its distance from the end of the snout, shorter than the parietals; loreal but little longer than deep; two postoculars, the upper fused with the supraoculars; temporals 1+2, keeled; seven upper labials, third and fourth entering the eye, fifth, sixth, and seventh keeled; four lower labials in contact with the anterior chin-shields; posterior chin-shields short. Scales in 19 rows, all strongly keeled. Ventrals 145; anal entire; subcaudals 100. Dark brown above, with an orange collar; upper lip and lower parts yellow; a brown dot in the middle of each ventral.

Total length 313 millim.; tail 102.

Guatemala.

3. *Streptophorus atratus*.

*Coluber atratus*, *Hallow. Proc. Ac. Philad.* 1845, p. 245.

*Streptophorus sebæ*, *Dum. & Bibr.* vii. p. 515 (1854); *Günth. Cat.* p. 16 (1858); *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 27, and *Icon. Gén.* 12, pl. iii. figs. 4-6, & 13, pl. i. fig. 1 (1865); *Bocourt, Miss. Sc. Mex., Rept.* p. 546, pls. xxxii. fig. 7, & xxxiii. fig. 1 (1883).

— *drozii*, *Dum. & Bibr. t. c.* p. 518; *Günth. l. c.*

— *lansbergii*, *Dum. & Bibr. l. c.*; *Jan, l. cc.* p. 26, l. 13, pl. i. fig. 2; *Bocourt, l. c.* p. 551, pl. xxxii. fig. 9.

*Elapoidis fasciatus*, *Hallow. Journ. Ac. Philad.* (2) iii. 1855, p. 35, pl. iv.

*Streptophorus atratus*, *Cope, Proc. Ac. Philad.* 1860, p. 76.

*Ninia atrata*, *Cope, t. c.* p. 340, and *Bull. U.S. Nat. Mus.* no. 32, 1886, p. 74.

— *lansbergii*, *Cope, Proc. Ac. Philad.* 1860, p. 340.

— *sebæ*, *Cope, l. c.*

*Streptophorus maculatus*, *Peters, Mon. Berl. Ac.* 1861, p. 924; *Bocourt, l. c.* p. 548, pl. xxxiii. fig. 3.

— *sebæ*, vars. *maculatus*, *collaris*, *schmidti*, *drozii*, *Jan, l. cc.*

*Ninia sebæ*, subsp. *tessellatus*, *Cope, Journ. Ac. Philad.* (2) viii. 1876, p. 145.

— *spilogaster*, *Peters, Sitzb. Ges. naturf. Fr.* 1881, p. 49.

*Streptophorus maculatus*, var. *pavimentatus et tessellatus*, *Bocourt, l. c.* pp. 549, 550, pls. xxxii. fig. 8, & xxxiii. figs. 2 & 4.

Rostral once and a half to twice as broad as deep, more or less visible from above; internasals and supraoculars small; frontal about as broad as long, as long as its distance from the end of the snout, shorter than the parietals; loreal once and a half to twice as long as deep; two postoculars (rarely one); temporals 1+2; seven or eight upper labials; four or five lower labials in contact with the anterior chin-shields; posterior chin-shields small. Scales in

19 rows, more or less strongly keeled. Ventrals 130-157; anal entire; subcaudals 37-67. Coloration very variable.

Total length 360 millim.; tail 60.

From Mexico to Venezuela and Ecuador.

A. Five lower labials in contact with the anterior chin-shields; fourth, fourth and fifth, or third and fourth upper labials entering the eye. Dark brown or blackish above, with or without a yellowish collar; belly yellowish, uniform or dotted with brown. (*S. lansbergi*, D. & B.; *N. spilogaster*, Peters.)

- a. ♀ (V. 143; C. 43). Intac, E. Ecuador. Mr. Buckley [C].  
 b. ♀ (V. 149; C. ?). Pallatanga, E. Ecuador. Mr. Buckley [C].  
 c-d. ♀ (V. 143; C. 51) Puerto Caballo. Prof. Peters [P].  
 & hgr. (V. 142; C. ?).  
 e, f. ♀ (V. 153, 147; Caracas.  
 C. 47, 49).  
 g. ♂ (V. 150; C. 59). Colombia.

B. Four lower labials in contact with the anterior chin-shields; fourth, or third and fourth upper labials entering the eye. Dark brown or blackish above, with a more or less distinct yellowish collar or occipital blotch; belly yellowish or brown. (*C. atratus*, Hallow.; *S. drozii*, D. & B.)

- a. ♀ (V. 153; C. 47). W. Ecuador. Mr. Fraser [C].  
 b. ♀ (V. 157; C. 50). Puerto Cabello. Prof. Peters [P].

C. Four (rarely five) lower labials in contact with the anterior chin-shields; third and fourth upper labials entering the eye. Head and body brown or purplish grey above; a black bar across the nape; black spots or cross bars on the back; belly yellowish, with square black spots, which may become confluent and form three stripes. (*S. maculatus*, Peters, *pavimentatus*, Bocourt.)

- a-d. ♂ (V. 142; C. 62) & ♀ Cartago, Costa Rica.  
 (V. 141, 155, 140; C. 50, 53, 52).  
 e. ♂ (V. 130; C. 56). Chontales, Nicaragua.

D. Four (rarely five) lower labials in contact with the anterior chin-shields; third and fourth (rarely fourth and fifth) upper labials entering the eye. Head and nape black, separated by a yellow collar; body red or reddish brown above, uniform, or spotted, or barred with black; belly yellow, uniform or dotted with brown. (*S. sebæ*, D. & B.; *E. fasciatus*, Hallow.; *S. collaris*, Jan.)

- a. ♂ (V. 140; C. 65). Chontales, Nicaragua.  
 b. ♀ (V. 138; C. 50). Guatemala. O. Salvin, Esq. [C].  
 c. ♀ (V. 136; C. 50). Pacific coast of Guatemala. O. Salvin, Esq. [C].  
 d. ♀ (V. 146; C. 51). Yzabal. O. Salvin, Esq. [C].

<i>e, f.</i> ♀ (V. 144; C. 44) & hgr. (V. 131, C. 58).	Honduras.	
<i>g-i.</i> ♂ (V. 134; C. 55) & ♀ (V. 147, 139; C. 44, 47).	British Honduras.	F. D. Godman & O. Salvin, Esqrs. [P.].
<i>k.</i> ♂ (V. 137; C. 56).	British Honduras.	Colonial Exhibition.
<i>l.</i> ♂ (V. 141; C. 67).	Belize.	
<i>m-p.</i> ♂ (V. 139, 132; C. 56, 54) & ♀ (V. 135, 139; C. ?, 50).	Teapa, Tabasco.	Mr. H. H. Smith [C.]. F. D. Godman & O. Salvin, Esqrs. [P.].
<i>q-s.</i> ♂ (V. 143; C. 49), ♀ (V. 134; C. 43), & yg. (V. 136; C. 50).	Jalapa, Mexico.	Mr. Hoego [C.].
<i>t-v.</i> ♂ (V. 141; C. ?), ♀ (V. 141; C. 48), & yg. (V. 140; C. 45).	Mexico.	Mr. Hugo Finck [C.].
<i>w-y.</i> ♀ (V. 142, 132; C. 50, 44) & yg. (V. 137; C. 59).	Mexico.	M. Sallé [C.].
<i>z.</i> ♀ (V. 145; C. 46).	Mexico.	

## 22. CHERSODROMUS.

*Chersodromus*, *Reinh. Vid. Meddel.* 1860, p. 242; *Jan, Arch. Zool. Anat. Phys.* ii. 1862, p. 25; *Bocourt, Miss. Sc. Mex., Rept.* p. 552 (1883).

*Opisthiodon*, *Peters, Mon. Berl. Ac.* 1861, p. 460.

Maxillary bone very short, not extending forwards beyond the palatines, with about 10 small, equal teeth; mandibular teeth equal. Head small, slightly distinct from neck; eye very small, with vertically subelliptical pupil; posterior nasal concave; a single præfrontal; no præocular, loreal and præfrontal entering the eye. Body moderate, cylindrical; scales striated and keeled, without pits, in 17 rows; ventrals rounded. Tail moderate; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Mexico and Guatemala.

1. *Chersodromus liebmanni*.

*Chersodromus liebmanni*, *Reinh. Vid. Meddel.* 1860, p. 243; *Peters, Mon. Berl. Ac.* 1861, p. 617; *Jan, Arch. Zool. Anat. Phys.* ii. 1862, p. 25, and *Icon. Gén.* 12, pl. iii. fig. 2 (1865); *Bocourt, Miss. Sc. Mex., Rept.* p. 552, pl. xxxiv. fig. 8 (1883).

— *nigricans*, *Reinh. l. c.* p. 245.

*Opisthiodon torquatus*, *Peters, Mon. Berl. Ac.* 1861, p. 461.

Rostral once and a half as broad as deep, just visible from above; internasals small; frontal broader than long, scarcely longer than the præfrontal, much shorter than the parietals; loreal a little longer than deep; two postoculars, upper usually fused with the supraocular, which is very small; temporals 1+2; seven upper labials, third and fourth entering the eye; five lower labials in



contact with the anterior chin-shields, which are in contact with the mental; posterior chin-shields short. Scales in 17 rows, rather feebly keeled, outer row smooth or faintly keeled. Ventrals 130-138; anal entire; subcaudals 36-42. Blackish above; a yellowish band crosses the temples and parietals; lower parts yellowish white, spotted or dotted with black.

Total length 285 millim.; tail 48.

Mexico and Guatemala.

a. ♂ (V. 138; C. 36). Huatuzco, Mexico. F. D. Godman & O. Salvin, Esqrs. [P.]

### 23. HYDRABLABES.

Hydrablaves, *Bouleng. Ann. & Mag. N. H.* (6) vii. 1891, p. 343.

Maxillary teeth small, equal, about 18; mandibular teeth small, equal. Head small, not distinct from neck; eye small, with round pupil; nostril valvular, an oblique slit between two nasals; three pairs of chin-shields. Body cylindrical, clongate; scales smooth, without apical pits, in 15 or 17 rows; ventrals rounded. Tail moderate, subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Borneo.

#### 1. Hydrablaves periops.

Ablaves periops, *Günth. Proc. Zool. Soc.* 1872, p. 595, fig.

Hydrablaves periops, *Bouleng. Ann. & Mag. N. H.* (6) vii. 1891, p. 344.

Snout short and broad, not projecting. Rostral much broader than deep, just visible from above; internasals not half as large as the præfrontals, usually forming a suture with the loreal; frontal nearly as broad as long, more than twice as broad as the supra-ocular, as long as its distance from the end of the snout, much shorter than the parietals; loreal longer than deep; two præ-, two post-, and two or three suboculars, the eye completely separated from the labials; temporals 1+2; eight or nine upper labials; three pairs of chin-shields, second largest and separating the third. Scales in 17 rows. Ventrals 190-209, the last divided; anal divided; subcaudals 62-74. Olive-brown above, with a more or less distinct yellowish streak along each side of the body anteriorly; sides blackish; ventrals whitish, edged with blackish; subcaudals blackish, edged with whitish.

Total length 450 millim.; tail 95.

Borneo.

a-b. ♂ (V. 209; C. 62)  
& yg. (V. 204; C. 74).

Matang.

(Types.)

c. ♂ (V. 190; C. 70).

Matang.

2. *Hydrablades præfrontalis*.

*Ablades periops*, var. *præfrontalis*, *Mocquard, Le Natur.* 1890, p. 154, and *Nouv. Arch. Mus.* (3) ii. 1890, p. 137, pl. ix. fig. 1.

*Hydrablades præfrontalis*, *Bouleng. Ann. & Mag. N. H.* (6) vii. 1891, p. 344.

Distinguished from the preceding by the fusion of the *præfrontals* into a single shield, and 15 rows of scales. Ventrals 178-180. Olive-brown above, with two pairs of blackish longitudinal streaks. Kina Baloo, North Borneo.

## 24. TRACHISCHIUM.

*Trachischium*, *Günth. Cat. Col. Sn.* p. 30 (1858); *Bouleng. Faun. Ind., Rept.* p. 284 (1890).

*Ablades*, part., *Günth. Rept. Brit. Ind.* p. 223 (1864).

Maxillary teeth 18 to 20, subequal; posterior mandibular teeth shorter than the anterior. Head not distinct from neck; eye small, with vertically subelliptic pupil; nostril between two small nasals; *præfrontals* sometimes united. Body cylindrical; scales smooth, in 13 or 15 rows, without apical pits; ventrals rounded. Tail short; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Eastern Himalayas and Khasi Hills.

*Synopsis of the Species.*

I. Scales in 13 rows, those of the ischiadic region keeled in the males.

- Præfrontal* shield usually undivided; one postocular; 150 ventrals or more . . . . . 1. *fuscum*, p. 297.  
*Præfrontal* shield usually undivided; one postocular; 132-145 ventrals . . . . . 2. *guentheri*, p. 298.  
 Two *præfrontals*; two postoculars . . . . . 3. *tenuiceps*, p. 299.

II. Scales in 15 rows, all smooth.

- Sixth upper labial largest . . . . . 4. *monticola*, p. 299.  
 Last three upper labials subequal . . . . . 5. *rubriventer*, p. 300.

1. *Trachischium fuscum*.

*Calamaria fusca*, *Blyth, Journ. As. Soc. Beng.* xxiii. 1854, p. 288.

— *obsкуро-striata*, *Blyth, l. c.*

*Trachischium rugosum*, *Günth. Cat.* p. 30 (1858).

— *fuscum*, *Günth. Proc. Zool. Soc.* 1860, p. 161; *Theob. Cat. Rept. As. Soc. Mus.* 1868, p. 45; *Anders. Proc. Zool. Soc.* 1871, p. 171; *Theob. Cat. Rept. Brit. Ind.* p. 144 (1876); *Bouleng. Faun. Ind., Rept.* p. 285 (1890).

*Ablades fuscum*, *Günth. Rept. Brit. Ind.* p. 225 (1864).

Rostral as broad as deep or a little deeper than broad, visible

from above; suture between the internasals very short; præfrontal usually single; frontal longer than its distance from the end of the snout, two thirds or three fourths the length of the parietals; loreal longer than deep; one præ- and one postocular; temporals 1+2; six upper labials, third and fourth entering the eye, first smallest, sixth largest; four lower labials in contact with the anterior chin-shields; posterior chin-shields small. Scales in 13 rows; those on the sides of the anal and basicaudal regions obtusely keeled in the male. Ventrals 150-162; anal divided; subcaudals 33-42. Dark brown or black above and below, with or without more or less indistinct lighter longitudinal streaks above.

Total length 510 millim.; tail 60.

Eastern Himalayas; Khasi Hills; Rangoon?

<i>a, b-c.</i> ♂ (V. 151; C. 39) & ♀ (V. 160, 158; C. 36, 36).	Nepal.	B. H. Hodgson, Esq. [P.].
<i>d-e.</i> ♀ (V. 162, 155; C. 34, 37).	Nepal.	E. India Comp. [P.].
<i>f.</i> ♂ (V. 154; C. 42).	Sikkim.	Sir J. Hooker [P.]. (Type of <i>T. rugosum</i> .)
<i>g.</i> ♀ (V. 160; C. 37).	Sikkim.	Messrs. v. Schlagir- tweit [C.].
<i>h-k.</i> ♀ (V. 161; C. 33) & yg. (V. 158, 159; C. 36, 37).	Darjeeling.	T. C. Jerdon, Esq. [P.].
<i>l.</i> ♂ (V. 150; C. 39).	Darjeeling.	W. T. Blanford, Esq. [P.].
<i>m-p.</i> ♂ (V. 158; C. 38), ♀ (V. 162; C. 36), and yg. (V. 159, 158); C. 35, 39).	Darjeeling.	Col. Beddome [C.].
<i>q.</i> Hgr. ♂ (V. 150; C. 41).	Khasi Hills.	T. C. Jerdon, Esq. [P.].

## 2. *Trachischium guentheri*. (PLATE XIX. fig. 1.)

*Trachischium obsкуро-striatum* (*non Blyth*), *Günth. Proc. Zool. Soc.* 1860, p. 161.

— *guentheri*, *Bouleng. Faun. Ind., Rept.* p. 285 (1890).

Rostral as broad as deep or a little deeper than broad, visible from above; suture between the internasals very short; præfrontal usually single; frontal longer than its distance from the end of the snout, two thirds the length of the parietals; loreal longer than deep; one præ- and one postocular; temporals 1+2; six upper labials, third and fourth entering the eye, first smallest, sixth largest; four lower labials in contact with the anterior chin-shields; posterior chin-shields small. Scales in 13 rows; male with keeled scales in the anal and basicaudal regions. Ventrals 132-145; anal divided; subcaudals 33-38. Dark brown above, with indistinct lighter and darker longitudinal streaks; yellowish beneath, uniform or scantily mottled with brown.

Total length 280 millim.; tail 35.

Sikkim.

<i>a-b.</i> ♂ (V. 132; C. 38)	Darjeeling.	W. T. Blanford,	} (Types.)
& ♀ (V. 145; C. 35).		Esq. [P.].	
<i>c.</i> Yg. (V. 135; C. 34).	Darjeeling.	Col. Beddome [C.].	
<i>d.</i> ♂ (V. 139; C. 33).	Sikkim.	Messrs. v. Schlagintweit [C.].	

### 3. *Trachischium tenuiceps.*

*Calamaria tenuiceps*, Blyth, *Journ. As. Soc. Beng.* xxiii. 1854, p. 288.

*Ablabes tenuiceps*, Günth. *Rept. Brit. Ind.* p. 224 (1864); *Theob. Cat. Rept. Brit. Ind.* p. 154 (1876).

*Trachischium tenuiceps*, Bouleng. *Faun. Ind., Rept.* p. 286 (1890).

Rostral a little broader than deep, visible from above; suture between the internasals about two thirds the length of that between the præfrontals; frontal longer than its distance from the end of the snout, a little shorter than the parietals; loreal longer than deep; one præocular; two postoculars; temporals 1+1 or 1+2; six upper labials, third and fourth entering the eye, first smallest, sixth largest; four lower labials in contact with the anterior chin-shields, which are a little longer than the posterior. Scales in 13 rows; male with keeled scales in the anal and basicaudal regions. Ventrals 134-138; anal divided; subcaudals 34-39. Blackish above, yellowish inferiorly.

Total length 350 millim.; tail 50.

Eastern Himalayas.

<i>a.</i> ♂ (V. 133; C. 39).	Nepal.	B. H. Hodgson, Esq. [P.].
<i>b-c.</i> ♂ (V. 135; C. 37)	Darjeeling.	T. C. Jerdon, Esq. [P.].
& ♀ (V. 134; C. 34).		

### 4. *Trachischium monticola.*

*Calamaria monticola*, Cantor, *Proc. Zool. Soc.* 1839, p. 50.

*Cyclophis monticola*, Günth. *Rept. Brit. Ind.* p. 232 (1864); *Theob. Cat. Rept. Brit. Ind.* p. 153 (1876).

*Ablabes albiventer*, Günth. *Proc. Zool. Soc.* 1875, p. 231.

*Trachischium monticola*, Bouleng. *Faun. Ind., Rept.* p. 286 (1890).

Rostral deeper than broad, visible from above; suture between the internasals about half as long as that between the præfrontals; frontal longer than its distance from the end of the snout, shorter than the parietals; loreal longer than deep; one præocular; two postoculars, rarely one; temporals 1+1; six upper labials, third and fourth entering the eye, first smallest, sixth largest; four lower labials in contact with the anterior chin-shields, which are a little longer than the posterior. Scales in 15 rows. Ventrals 113-135; anal divided; subcaudals 28-44. Dark brown above, with two more or less distinct pale brown longitudinal bands edged on each side with a black line; yellowish inferiorly; young with an interrupted yellow collar.

Total length 230 millim.; tail 30.

Darjeeling, Naga Hills, Assam.



- a-e.* ♂ (V. 113, 115; C. 30, 32), Darjeeling. T. C. Jerdon, Esq. [P.].  
 ♀ (V. 125; C. 29), & yg. (Types of *Ablabes albiventer*.)  
 (V. 128, 135; C. 32, 30).  
*f-i.* ♂ (V. 117; C. 34), ♀ (V. 123, 125; C. 28, 28), & yg. Darjeeling. T. C. Jerdon, Esq. [P.].  
 (V. 119; C. 31).

### 5. *Trachischium?* *rubriventer*.

- Cyclophis rubriventer*, Jerdon, *Proc. As. Soc. Beng.* 1870, p. 80;  
*Theob. Cat. Rept. Brit. Ind.* p. 159 (1876).  
*Trachischium?* *rubriventer*, *Bouleng. Faun. Ind., Rept.* p. 286 (1890).

One præ- and two postoculars; six upper labials, the last three subequal in size; temporals 1+1. Scales in 15 rows. Ventrals 127-135; subcaudals 33-38. Brown, with a pale lateral band from the eye to the tip of the tail; below this, a mottled brown and yellowish band; chin, throat, and anterior part of neck yellow, the rest of the lower parts red.

Total length 200 millim.; tail 30.

Khasi Hills.

### 25. RHABDOPS.

- Ablabes*, part., *Günth. Rept. Brit. Ind.* p. 223 (1864).  
*Grotea* (*non Cress.*), *Theob. Cat. Rept. As. Soc. Mus., Journ. As. Soc. Beng.* 1868, p. 45.  
*Pseudocyclophis*, part., *Bouleng. Faun. Ind., Rept.* p. 299 (1890).

Maxillary short, but extending beyond the palatine, with 10 to 12 small and subequal teeth; mandibular teeth subequal. Head small, much depressed, not distinct from neck; eye very small, with vertically subelliptic pupil; nostril in a semidivided nasal. Body much clongate, cylindrical; scales smooth, without apical pits, in 17 rows; ventrals rounded. Tail rather long; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

India, Southern China.

#### 1. *Rhabdops olivaceus*. (PLATE XIX. fig. 2.)

- Ablabes olivaceus*, *Beddome, Madras Quart. Journ. Med. Sc.* 1863;  
*Günth. Rept. Brit. Ind.* p. 227 (1864).  
*Pseudocyclophis olivaceus*, *Bouleng. Faun. Ind., Rept.* p. 300 (1890).

Rostral large, twice as broad as deep, visible from above; nasal divided below the nostril; suture between the internasals shorter than that between the præfrontals; frontal only a little if at all longer than broad, three or four times as broad as the supraocular, much longer than its distance from the end of the snout and a little shorter than the parietals; loreal longer than deep; two præ- and two postoculars; temporals 1+1; five upper labials, third entering the eye, fifth very large; four lower labials in contact with the anterior chin-shields; posterior chin-shields nearly as long as the

anterior, separated from each other by two scales. Scales in 17 rows. Ventrals 206-215; anal divided; subcaudals 68-73. Dull olive-green above and below, with four longitudinal series of small black spots on the back.

Total length 540 millim.; tail 95.

Southern India.

- |                       |                    |                              |
|-----------------------|--------------------|------------------------------|
| a. ♂ (V. 215; C. 73). | Manantoddy, Wynad. | Col. Beddome [C.]<br>(Type.) |
| b. ♀ (V. 206; C. 68). | Wynad.             | Col. Beddome [C.]            |

## 2. *Rhabdops bicolor*.

*Calamaria bicolor*, *Blyth, Journ. As. Soc. Beng.* xxiii. 1854, p. 289.

*Ablabes bicolor*, *Günth. Rept. Brit. Ind.* p. 226 (1864); *Anders. An. Zool. Res. Yunnan*, p. 809 (1879).

*Grotea bicolor*, *Theob. Cat. Rept. As. Soc. Mus.* 1863, p. 45.

*Pseudocyclophis bicolor*, *Bouleng. Faun. Ind., Rept.* p. 300 (1890).

Rostral large, more than twice as broad as deep, just visible from above; nasal divided below the nostril; internasal single, as long as or a little shorter than the likewise single præfrontal; frontal as broad as long, as long as its distance from the end of the snout, two thirds the length of the parietals; supraocular very small; loreal as long as deep; one præocular; two postoculars; temporals 1+1; five upper labials, the upper angle of the third entering the eye, fifth very large; three lower labials in contact with the anterior chin-shields, which are not longer than the posterior. Scales in 17 rows. Ventrals 199-213; anal divided; subcaudals 58-77. Blackish brown above, brownish white inferiorly.

Total length 600 millim.; tail 130.

Khasi Hills, Assam, Yunnan.

- |                       |              |                          |
|-----------------------|--------------|--------------------------|
| a. ♂ (V. 213; C. 77). | Khasi Hills. | Dr. Griffith.            |
| b. ♀ (V. 199; C. ?).  | Khasi Hills. | T. C. Jerdon, Esq. [P.]. |

## 26. PLAGIOPHOLIS.

Maxillary short, extending forwards but slightly beyond the palatine, with 16 small equal teeth; mandibular teeth equal. Head small, not distinct from neck; eye rather small, with round pupil; no loreal, præocular in contact with a large semidivided nasal. Body short, cylindrical; scales smooth, without pits, disposed obliquely, in 15 rows; ventrals rounded. Tail short; subcaudals partly entire, partly in two rows. Hypapophyses developed throughout the vertebral column.

Mountains of Burma.

### 1. *Plagiopholis blakewayi*. (PLATE XIX. fig. 3.)

Rostral as broad as deep, visible from above; internasals much broader than long, a little shorter than the præfrontals; frontal

hexagonal, once and one third as long as broad, longer than its distance from the end of the snout, slightly shorter than the parietals, which are squarely truncate behind; nasal large, twice as long as deep, divided below the nostril, forming a suture with the single præocular; two postoculars; temporals 1+1, first small, second large; five upper labials, third entering the eye; anterior chin-shields a little longer than the posterior, in contact with the symphyseal and three lower labials. Scales in 15 rows. Ventrals 125; anal entire; subcaudals 31, fourth and fifth, and eighth to seventeenth entire, the rest in pairs. Dark purplish brown above, with two series of small black spots, grey on the sides; whitish beneath, speckled with brown.

Total length 245 millim.; tail 30.

Mountains of Burma.

a. ♂ (V. 125; C. 31). Toungyi, Shan States, Lieut. Blakeway [C.], 5000 feet.

## 27. OXYRHABDIUM.

*Stenognathus* (*non Chaud.*), *Dum. & Bibr. Erp. Gén.* vii. p. 503 (1854); *Jan, Arch. Zool. Anat. Phys.* ii. 1862, p. 28.

*Rhabdosoma*, part., *Günth. Cat. Col. Sn.* p. 10 (1858).

Maxillary teeth 30 to 35, small, equal; mandibular teeth equal. Head not distinct from neck; eye small, with vertically subelliptic pupil; nostril pierced between two small nasals; a pair of small internasals; no præocular; loreal and præfrontal entering the eye. Body cylindrical; scales smooth, in 15 rows, without apical pits; ventrals rounded. Tail moderate, subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Philippine Islands.

### 1. *Oxyrhabdium modestum*.

*Stenognathus modestus*, *Dum. & Bibr.* vii. p. 504 (1854); *Peters, Mon. Berl. Ac.* 1861, p. 684; *Jan, Arch. Zool. Anat. Phys.* ii. 1862, p. 28, and *Icon. Gén.* 13, pl. i. fig. 3 (1865).

*Rhabdosoma leporinum*, part., *Günth. Cat.* p. 12 (1858).

*Stenognathus modestus*, part., *Günth. Proc. Zool. Soc.* 1873, p. 169.

*Rhabdosoma modestum*, part., *Günth. Proc. Zool. Soc.* 1879, p. 77.

*Geophis schadenbergi*, *Fischer, Jahrb. Wiss. Anst. Hamb.* ii. 1885, p. 93, pl. iii. fig. 4.

— *modestus*, part., *Boettg. Ber. Senckenb. Ges.* 1886, p. 106.

Snout obtusely pointed; rostral small, a little deeper than broad, just visible from above; suture between the internasals one third or one fourth the length of that between the præfrontals; frontal much longer than broad, as long as its distance from the end of the snout, shorter than the parietals, about twice as broad as the supraocular; two postoculars; temporals 1+2; eight upper labials, four anterior small, fifth and sixth entering the eye, eighth very large; five or four

lower labials in contact with the chin-shields, of which there is but one large pair. Scales in 15 rows. Ventrals 155-193; anal entire; subcaudals 50-68. Reddish brown above; upper lip and lower parts yellowish; young with a yellow band across the nape.

Total length 550 millim.; tail 95.

Philippine Islands.

- |                         |                 |   |
|-------------------------|-----------------|---|
| a. ♀ (V. 160; C. 53).   | Philippines.    | H. Cuming, Esq. [C.]                        |
|                         |                 | (One of the types of <i>R. leporinum</i> .) |
| b. Yg. (V. 155; C. 62). | Philippines.    | H. Cuming, Esq. [C.]                        |
| c. ♀ (V. 177; C. 56).   | Dinagat Island. | A. Everett, Esq. [C.]                       |

## 2. *Oxyrhabdium leporinum*. (PLATE XIX. fig. 4.)

*Rhabdosoma leporinum*, part., *Günth. Cat.* p. 12 (1858).

*Stenognathus brevirostris*, *Peters, Mon. Berl. Ac.* 1872, p. 586.

— *modestus*, part., *Günth. Proc. Zool. Soc.* 1873, p. 169.

*Rhabdosoma modestum*, part., *Günth. Proc. Zool. Soc.* 1879, p. 77.

*Geophis brevirostris*, *Boettg. Ber. Senckenb. Ges.* 1886, p. 106.

Distinguished from the preceding in the following points:—  
Suture between the internasals half as long as that between the præfrontals; frontal a little longer than broad, two thirds the length of the parietals, rather more than twice as broad as the supraocular; seven upper labials, fourth and fifth entering the eye. Ventrals 169-180; subcaudals 43-51. Blackish brown above; upper lip and belly yellowish; lower surface of tail brownish.

Total length 820 millim.; tail 105.

Philippine Islands.

- |                       |              |                      |
|-----------------------|--------------|----------------------|
| a. ♀ (V. 169; C. 43). | Philippines. | H. Cuming, Esq. [C.] |
|                       |              | (One of the types.)  |
| b. ♀ (V. 180; C. 45). | Luzon.       | Dr. A. B. Meyer [C.] |

## 28. XYLOPHIS.

*Platypteryx* (*non Lasp.*), *Dum. & Bibr. Exp. Gén.* vii. p. 500 (1854);  
*Jan, Arch. Zool. Anat. Phys.* ii. 1862, p. 19.

*Rhabdosoma*, part., *Günth. Cat. Col. Sn.* p. 10 (1858).

*Geophis*, part., *Günth. Rept. Brit. Ind.* p. 200 (1864).

*Xylophis*, *Beddome, Proc. Zool. Soc.* 1878, p. 576; *Bouleng. Faun. Ind., Rept.* p. 283 (1890).

Maxillary teeth 20 to 25, small, equal; mandibular teeth equal. Head not distinct from neck; eye small, with round pupil; nostril pierced between two small nasals; internasals small; no præocular, loreal and præfrontal entering the eye. Body cylindrical; scales smooth, in 13 or 15 rows, without apical pits; ventrals rounded. Tail short, subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Southern India.



1. *Xylophis perroteti*.

*Platypteryx perroteti*, *Dum. & Bibr.* vii. p. 501 (1854); *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 20, and *Icon. Gén.* 12, pl. i. fig. 1 (1865).

*Rhabdosoma microcephalum*, *Günth. Cat.* p. 12 (1858).

*Geophis microcephalus*, *Günth. Rept. Brit. Ind.* p. 200, pl. xviii. fig. A (1864).

— *perroteti*, *Anders. Journ. As. Soc. Beng.* xl. 1871, p. 33.

*Xylophis perroteti*, *Bouleng. Faun. Ind., Rept.* p. 283, fig. (1890).

Snout rather pointed; rostral small, deeper than broad, just visible from above; suture between the internasals one third to one half the length of that between the præfrontals; frontal as long as broad, or slightly longer than broad, nearly as long as its distance from the end of the snout, and two thirds or three fifths the length of the parietals; supraocular small but yet much longer than the single postocular; loreal much elongate and usually entering the eye; in some specimens, however, the præfrontal forms a short suture, with the third labial in front of the eye; six upper labials, third and fourth entering the eye, first very small, fifth largest; temporals 1 + 2; four very narrow lower labials in contact with the chin-shields, which are very large and in contact with the symphysial; no posterior chin-shields. Scales in 13 rows. Ventrals 130–147; anal entire; subcaudals 17–38. Brown above, spotted with black, or with more or less distinct black longitudinal bands; sometimes an ill-defined yellow collar; lips black and yellow; lower surfaces black and white, or grey spotted with black, or nearly uniform brownish black.

Total length 620 millim.; tail 35.

Hills of Southern India.

- |   |                                     |  |
|---|-------------------------------------|--|
| a. ♀ (V. 147; C. 17).                         | Madras Presidency.                  | T. C. Jerdon, Esq. [P.]<br>(Type of <i>R. microcephalum</i> .) |
| b-c. ♂ (V. 142; C. 28) & ♀ (V. 147; C. 17).   | Malabar.                            | Col. Beddome [C.]  |
| d. ♂ (V. 138; C. 38).                         | Coonoor, Nilgherries,<br>5900 feet. | W. Davison, Esq. [P.]  |
| e-f. ♀ (V. 139; C. 19) & yg. (V. 145; C. 20). | Kotagiri, Nilgherries.              | Dr. J. R. Henderson.   |
| g. ♂ (V. 130; C. 31).                         | Anamallays, 4700 feet.              | W. Davison, Esq. [P.]  |
| h. ♂ (V. 139; C. 29).                         | — ?                                 | Chatham Museum.  |
| i. ♂ (V. 143; C. 32).                         | — ?                                 | Dr. A. Günther [P.]  |

2. *Xylophis stenorhynchus*. (PLATE XX. fig. 1.)

*Geophis stenorhynchus*, *Günth. Proc. Zool. Soc.* 1875, p. 230.

*Xylophis indicus*, *Beddome, Proc. Zool. Soc.* 1878, p. 576.

— *stenorhynchus*, *Bouleng. Faun. Ind., Rept.* p. 284 (1890).

Closely allied to the preceding, but scales in 15 rows. Ventrals

120-131; anal entire; subcaudals 17-31. Dark brown above, uniform or with three rather indistinct darker longitudinal lines, and a yellowish collar; lower surfaces uniform dark brown.

Total length 230 millim.; tail 20.

Travancore and Madura Hills.

a-c. ♂ (V. 118, 120; C. 25, 28) & ♀ (V. 129; C. 17).	Travancore.	Col. Beddome [C.]. (Types.)
d. ♀ (V. 131; C. 17).	Travancore.	Col. Beddome [C.].
e. ♂ (V. 129; C. 31).	Madura Hills, 5000 feet.	Col. Beddome [C.]. (Type of <i>Xylophis indicus</i> .)

## 29. BRACHYORRHUS.

Brachyorrhos, *Boie, Isis*, 1827, p. 519; *Dum. & Bibr. Erp. Gén.* vii. p. 510 (1854); *Günth. Cat. Col. Sn.* p. 13 (1858); *Jan, Arch. Zool. Anat. Phys.* ii. 1862, p. 18.

Brachyorrhos, part., *Wagl. Syst. Amph.* p. 190 (1830).

Calamaria, part., *Schleg. Phys. Serp.* ii. p. 25 (1837).

Calamophis, *Meyer, Mon. Berl. Ac.* 1874, p. 135.

Mainophis, *Macleay, Proc. Linn. Soc. N. S. W.* ii. 1877, p. 36.

Atractocephalus, *Sauvage, Bull. Soc. Philom.* (7) iii. 1879, p. 62.

Oxyorrhos, *Fischer, Verh. nat. Ver. Hamb.* (2) iii. 1879, p. 89.

Maxillary teeth 20 to 22, subequal; posterior mandibular teeth a little shorter than the anterior. Head not distinct from neck; eye small, with vertically subelliptic pupil; nostril pierced in a small, single or divided nasal; a pair of internasals (sometimes united); no loreal; præocular present or absent. Body cylindrical; scales smooth, without apical pits, in 17 or 19 rows; ventrals rounded. Tail short; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Malay Archipelago and New Guinea.

### 1. Brachyorrhus albus.

*Coluber albus*, *Linn. Mus. Ad. Frid.* p. 24, pl. xiv. fig. 2 (1754), and *S. N.* i. p. 378 (1766); *Merrem, Beitr. Gesch. Amph.* ii. p. 30, pl. vii. (1790); *Daud. Rept.* vii. p. 49 (1803).

— brachyurus, *Shaw, Zool.* iii. p. 470 (1802); *Kuhl, Beitr. Zool. Vergl. Anat.* p. 89 (1820).

Brachyorrhos albus, *Boie, Isis*, 1827, p. 522; *Dum. & Bibr.* vii. p. 511 (1854); *Günth. Cat.* p. 13 (1858); *Jan, Icon. Gén.* 13, pl. ii. figs. 4 & 5 (1865); *Peters & Doria, Ann. Mus. Genova*, xiii. 1878, p. 385.

— kuhlii, *Boie, t. c.* p. 540.

Calamaria brachyorrhos, part., *Schleg. Phys. Serp.* ii. p. 33, pl. i. figs. 21-23 (1837).

Rhabdion gastrotenia, *Bleek. Nat. Tijdschr. Nederl. Ind.* xxii. 1860, p. 42.

Calamophis jobiensis, *Meyer, Mon. Berl. Ac.* 1874, p. 135.

Mainophis robusta, *Macleay, Proc. Linn. Soc. N. S. W.* ii. 1877, p. 36.

*Brachyorrhos jobiensis*, Peters & Doria, l. c. p. 385.

*Atractocephalus raffrayi*, Sauvage, *Bull. Soc. Philom.* (7) iii. 1879, p. 62.

*Oxyorrhos fusiformis*, Fischer, *Verh. nat. Ver. Hamb.* (2) iii. 1879, p. 89, pl. ii.

*Brachyorrhos albus*, var. *conjunctus*, Fischer, *Arch. f. Nat.* 1880, p. 226.

Snout obtusely acuminate; rostral as deep as broad, just visible from above; internasals as long as or a little longer than the suture between the præfrontals; the internasals are fused to a single shield in some specimens from New Guinea; frontal longer than broad, longer than its distance from the end of the snout, shorter than the parietals, twice to twice and a half as broad as the supraocular; præocular distinct or fused with the præfrontal; two postoculars; temporals 1 + 2 or 2 + 3; six or seven upper labials, third or fourth or third and fourth entering the eye; a single pair of chin-shields, in contact with four labials. Scales in 17 or 19 rows. Ventrals 160-182; anal divided (rarely entire); subcaudals 20-46. Adult uniform brown above, yellowish inferiorly; young with an interrupted yellow band across the occiput and a brown streak or series of brown spots along the middle of the belly and tail.

Total length 190 millim.; tail 65.

Java, Timor, Moluccas, New Guinea.

- |  |          |   |
|--|----------|---|
| a. ♂ (Sc. 19; V. 170; C. 36; a præocular; 4th labial entering the eye; a single temporal in contact with the postoculars).         | Timor.   | Leyden Museum.  |
| b. ♂ (Sc. 19; V. 177; C. 36; no præocular; 3rd labial entering the eye; two temporals in contact with the postoculars).            | Ternate. | H.M.S. 'Challenger.'                                  |
| c. ♀ (Sc. 19; V. 182; C. 27; no præocular; 3rd labial entering the eye; two temporals in contact with the postoculars).            | Ternate. | H.M.S. 'Challenger.'                                  |
| d. Yg. (Sc. 19; V. 178; C. 27; no præocular; 3rd and 4th labials entering the eye; two temporals in contact with the postoculars). | Amboyna. | Dr. Bleeker. (Type of <i>Rhabdion gastrotaenia</i> .) |

### 30. ELAPOIDES.

*Elapoides*, Boie, *Isis*, 1827, p. 519; *Wagl. Syst. Amph.* p. 194 (1830); *Dum. & Bibr. Erp. Gén.* vii. p. 122 (1854); *Günth. Cat. Col. Sn.* p. 15 (1858).

*Calamaria*, part., *Schleg. Phys. Serp.* ii. p. 25 (1837).

*Elapoides*, part., *Jan, Arch. Zool. Anat. Phys.* ii. 1862, p. 20.

Maxillary bone very short, not extending anteriorly beyond the palatine, with about 20 small and closely set equal teeth; mandi-

bular teeth subequal. Head not distinct from neck; eye small, with round pupil; nostril large, between two nasals, the posterior of which is concave; no præocular, loreal and præfrontal entering the eye. Body cylindrical, slender; scales lanceolate, keeled, without apical pits, in 15 rows; ventrals rounded. Tail long, subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Malay Archipelago.

### 1. *Elapoides fuscus*.

*Elapoides fuscus*, Boie, l. c.; Dum. & Bibr. p. 123 (1854); Günth. Cat. p. 15 (1858); Jan, l. c. p. 21, and Icon. Gén. 12, pl. i. figs. 2 & 3 (1865).

*Calamaria elapoides*, Schleg. Phys. Serp. ii. p. 44, pl. i. figs. 31-33 (1837).

Snout short, broadly rounded; rostral much broader than deep, just visible from above; suture between the internasals as long as or a little shorter than that between the præfrontals; frontal at least as broad as long, much shorter than the parietals; supraocular very small, the præfrontal entering the eye; a single very small postocular, in contact with a narrow, elongate temporal; six upper labials, third and fourth entering the eye, fifth very large; three or four lower labials in contact with the anterior chin-shields, which are about as long as the posterior. Scales strongly keeled, in 15 rows. Ventrals 146-158; anal entire; subcaudals 74-91. Dark brown or brown and yellow above; uniform yellowish inferiorly, passing to brown or brownish on the tail.

Total length 470 millim.; tail 120.

Java, Sumatra.

#### A. Uniform dark brown above.

- |                                     |   |                       |
|-------------------------------------|---|-----------------------|
| a. ♀ (V. 147; C. 75).               | Java.                                       | Leyden Museum.        |
| b. ♀ (V. 155; C. 76).               | Java.                                       |                       |
| c-d. ♂ (V. 148, 146;<br>C. 87, 91). | Willis Mountains,<br>Kediri, Java, 5000 ft. | Baron v. Huegel [C.]. |

#### B. Dark brown above, with small yellow spots.

- |                       |                       |                       |
|-----------------------|-----------------------|-----------------------|
| e. ♀ (V. 152; C. 74). | Willis Mts., 5000 ft. | Baron v. Huegel [C.]. |
| f. ♀ (V. 158; C. ?).  | Java.                 | Hr. Frühstorfer [C.]. |

#### C. Anterior half of body yellow, with a dark brown vertebral stripe and a series of small dark brown spots on each side; posterior half of back uniform dark brown.

- |                     |          |  |
|---------------------|----------|--|
| g. ♀ (V. 147; C. ?) | Sumatra. | Dr. Bleeker.<br>( <i>Elaphis sumatranus</i> , Blkr.) |
|---------------------|----------|--|



31. **ACHALINUS.**

*Achalinus*, *Peters, Mon. Berl. Ac.* 1869, p. 436.

*Ophielaps*, *Sauvage, Bull. Soc. Philom.* (7) i. 1877, p. 103.

Maxillary teeth 22 to 25, small, equal; mandibular teeth equal. Head not distinct from neck; eye small, with round or vertically subelliptic pupil; nostril rather large, pierced in the anterior of two nasals; posterior nasal concave; no præocular, loreal extending from the nasals to the eye; postoculars not distinct from anterior temporals. Body cylindrical, slender; scales lanceolate, feebly imbricate, keeled, without apical pits, in 21 to 25 rows; ventrals rounded. Tail long, subcaudals single. Hypapophyses developed throughout the vertebral column.

China and Japan.

*Synopsis of the Species.*

- Scales in 25 rows; suture between the internasals longer than that between the præfrontals ..... 1. *rufescens*, p. 308.  
 Scales in 23 or 25 rows; suture between the internasals shorter than that between the præfrontals ..... 2. *braconnieri*, p. 309.  
 Scales in 21 rows; suture between the internasals as long as that between the præfrontals ..... 3. *spinalis*, p. 309.

1. ***Achalinus rufescens*.** (PLATE XX. fig. 2.)

*Achalinus rufescens*, *Bouleng. Ann. & Mag. N. H.* (6) ii. 1888, p. 43.

Head narrow, elongate; rostral small, as deep as broad, not visible from above; suture between the internasals twice as long as that between the præfrontals; frontal broader than long, hardly half as long as the parietals, four times as broad as the supraocular; only the upper anterior temporal in contact with the eye; temporals 2+2; three shields bordering the parietals on each side, the third very large and separated from its fellow by a small scale; six upper labials, first very small, fourth and fifth entering the eye, sixth much elongate; three pairs of large chin-shields, immediately followed by the ventrals. Scales strongly keeled, some distinctly tricarinate, in 25 rows. Ventrals 136; anal entire; subcaudals 82. Uniform pale reddish brown above; upper labials and a spot on the temple yellow; uniform yellowish beneath.

Total length 290 millim.; tail 80.

Southern China.

- a. ♂ (V. 133; C 82). Hong Kong. City Hall Museum, Hong Kong [E.]. (Type.)

2. *Achalinus braconnieri*.

*Ophielaps braconnieri*, *Sauvage, Bull. Soc. Philom.* (7) i. 1877, p. 109.  
*Achalinus rufescens* (*non Bouleng.*), *Günth. Ann. & Mag. N. H.* (6)  
 iv. 1889, p. 220.

Distinguished from the preceding by the following characters:—  
 Suture between the internasals shorter than that between the præfrontals; frontal thrice to thrice and a half as broad as the supraocular; both anterior temporals in contact with the eye; two pairs of chin-shields. Scales uncarinate, in 23 or 25 rows. Ventrals 159–170; subcaudals 48–59. Uniform blackish, ventrals with a narrow whitish edge.

Total length 550 millim.; tail 83.

Southern China.

*a-c, d.* ♂ (V. 161, 163, 159; Ichang. A. E. Pratt, Esq. [C.].  
 C. 57, 59, 59) & ♀ (V. 170;  
 C. 48).

3. *Achalinus spinalis*.

*Achalinus spinalis*, *Peters, Mon. Berl. Ac.* 1869, p. 436, pl. —. fig. 1.

Suture between the internasals as long as that between the præfrontals; frontal broader than long, about thrice as broad as the supraocular; temporals 2+2, both anterior in contact with the eye; six upper labials, first very small, fourth and fifth entering the eye, sixth very long; three pairs of chin-shields, immediately followed by the ventrals. Scales distinctly keeled, in 21 rows. Ventrals 149; anal entire; subcaudals 62. Brown above, with a median black dorsal line; brownish yellow inferiorly, with a black stripe along the tail.

Total length 360 millim.; tail 115.

Japan (?).

## 32. HAPLOCERCUS.

*Haplocercus*, *Günth. Cat. Col. Sn.* p. 14 (1858), and *Rept. Brit. Ind.*  
 p. 204 (1864); *Bouleng. Faun. Ind., Rept.* p. 290 (1890).

*Aspidura*, part., *Jan, Arch. Zool. Anat. Phys.* ii. 1862, p. 29.

Maxillary teeth about 10, moderately large, subequal; posterior mandibular teeth a little shorter than the anterior. Head not distinct from neck; eye rather small, with round pupil; nostril between two small nasals and the first labial; no loreal; a single internasal. Body cylindrical; scales keeled, without apical pits, in 17 rows; ventrals rounded. Tail moderate; subcaudals single. Hypapophyses developed throughout the vertebral column.

Ceylon.

1. *Haplocercus ceylonensis*.

*Haplocercus ceylonensis*, *Günth. Cat.* p. 15 (1858), and *Rept. Brit. Ind.* p. 204, pl. xviii. fig. G (1864); *Bouleng. Faun. Ind., Rept.* p. 291 (1890).

*Aspidura carinata*, *Jan, Arch. Zool. Anat. Phys.* ii. 1862, p. 30, and  
*Icon. Gén.* 13, pl. i. fig. 5 (1865).

— *ceylonensis*, *Theob. Cat.* p. 143 (1876).

Rostral a little deeper than broad, not visible from above; frontal as long as its distance from the end of the snout, three fifths the length of the parietals; præfrontals in contact with the second and third upper labials; one præ- and two postoculars; temporals 1+2; seven upper labials, fourth, or third and fourth, entering the eye; four lower labials in contact with the anterior chin-shields; posterior chin-shields small, scale-like. Scales elongate, smooth on the nape, moderately keeled on the anterior half of the back, sharply keeled on the posterior half and on the tail. Ventrals 177-207; anal single; subcaudals 37-56. Brown above, with a black vertebral line, and, on each side, a series of small black spots; an oblique yellowish, black-edged band on each side of the nape, which may disappear in the adult; lower surface uniform yellowish.

Total length 430 millim.; tail 60.

Ceylon.

- |  |                     |                               |            |
|--|---------------------|-------------------------------|------------|
| a. ♂ (V. 180; C. 56).  | Ceylon.             | R. Templeton, }<br>Esq. [P.]. | } (Types.) |
| b. ♀ (V. 207; C. 50).  | Ceylon.             |                               |            |
| c. ♂ (V. 177; C. 42).  | Ceylon.             |                               |            |
| d-f. ♀ (V. 192, 188;<br>C. 37, 40) & yg. (V.<br>196; C. 39). | Punduloya, 4000 ft. | E. E. Green, Esq. [P.].       |            |

### 33. ASPIDURA.

*Aspidura*, *Wagl. Syst. Amph.* p. 191 (1830); *Dum. & Bibr. Erp. Gén.* vii. p. 127 (1854); *Günth. Cat. Col. Sn.* p. 14 (1858), and *Rept.*

*Brit. Ind.* p. 202 (1864); *Bouleng. Fann. Ind., Rept.* p. 288 (1890).

*Calamaria*, part., *Schleg. Phys. Serp.* ii. p. 25 (1837).

*Aspidura*, part., *Jan, Arch. Zool. Anat. Phys.* ii. 1862, p. 29.

Maxillary teeth about 20, small, equal; posterior mandibular teeth a little shorter than the anterior. Head not distinct from neck; eye small, with round pupil; nostril between two small nasals and the first labial; no loreal; a single internasal; præocular present or absent. Body cylindrical; scales smooth, without apical pits, in 15 or 17 rows; ventrals rounded; tail short; subcaudals single. Hypapophyses developed throughout the vertebral column.

Ceylon.

#### *Synopsis of the Species.*

A. Scales in 17 rows.

a. Both postoculars in contact with the parietal; ventrals 125-150.

A præocular; supraocular more than half

length of frontal . . . . . 1. *brachyorrhus*, p. 311.

- No præocular; supraocular not half length  
of frontal ..... 2. *copii*, p. 311.
- b. Only the upper postocular in contact with the parietal;  
ventrals 106-111..... 3. *guentheri*, p. 312.
- B. Scales in 15 rows ..... 4. *trachyprocta*, p. 313.

### 1. *Aspidura brachyorrhos*.

- Scytale brachyorrhos*, *Boie, Isis*, 1827, p. 517.  
*Calamaria scytale*, *Schleg. Phys. Serp.* ii. p. 42 (1837).  
*Aspidura scytale*, *Dum. & Bibr.* vii. p. 128 (1854).  
— *brachyorrhos*, part., *Günth. Cat.* p. 14 (1858).  
— *scytale*, part., *Jan, Arch. Zool. Anut. Phys.* ii. 1863, p. 29, and  
*Icon. Ophid.* 13, pl. ii. fig. 2 (1865).  
— *brachyorrhos*, *Günth. Rept. Brit. Ind.* p. 202 (1864); *Theob.*  
*Cat. Rept. Brit. Ind.* p. 142 (1876); *Bouleng. Faun. Ind., Rept.*  
p. 288, fig. (1890).

Rostral small, deeper than broad, scarcely visible from above; frontal a little longer than its distance from the end of the snout, two thirds the length of the parietals; supraocular more than half the length of the frontal; præfrontals in contact with the second and third upper labials, separated from the eye by a præocular; two postoculars, lower largest, both in contact with the parietal; temporals 1+2; six upper labials, first smallest, sixth largest, fourth entering the eye; four lower labials in contact with the anterior chin-shields; posterior chin-shields small and scale-like. Scales in 17 rows, all perfectly smooth. Ventrals 139-154; anal entire; subcaudals 27-38. Pale yellowish or reddish brown above, with four more or less indistinct darker longitudinal streaks and a vertebral series of blackish dots; an oblique blackish cross band on each side of the nape; belly uniform yellowish, tail more or less abundantly freckled with brown.

Total length 360 millim.; tail 40.

Ceylon.

- |  |         |              |
|--|---------|--------------|
| a. ♀ (V. 144; C. 27).                    | Ceylon. | Dr. Kelaart. |
| b-k. ♂ (V. 141, 142, 139; C. 38, 37, ?), | Ceylon. |              |
| ♀ (V. 154, 152, 147; C. 30, 38,          |         |              |
| 29), & yg. (V. 148, 141, 142;            |         |              |
| C. 32, 35, 35).                          |         |              |

### 2. *Aspidura copii*.

- Aspidura brachyorrhos*, part., *Günth. Cat.* p. 14 (1858).  
— *copii*, *Günth. Rept. Brit. Ind.* p. 203, pl. xviii. fig. E (1864);  
*Theob. Cat. Rept. Brit. Ind.* p. 143 (1876); *Bouleng. Faun. Ind.,*  
*Rept.* p. 289 (1890).

Rostral small, deeper than broad, not visible from above; frontal a little longer than its distance from the end of the snout, three fifths the length of the parietals; supraocular very small, not half the length of the frontal; præfrontals in contact with the second,



third, and fourth upper labials and with the eye; no præocular; two postoculars, lower largest, both in contact with the parietal; temporals 1+2; six upper labials, first smallest, sixth largest, fourth entering the eye; four lower labials in contact with the anterior chin-shields (which, in the type specimen, happen to be divided into two pairs); posterior chin-shields small and scale-like. Scales in 17 rows, those on the sides of the anal region and on the tail keeled in the male. Ventrals 125-150; anal entire; subcaudals 20-33. Brown above, with two longitudinal series of large black, pale-edged spots; an oblique, black cross band on each side of the nape; lower surfaces yellowish, spotted or freckled with brown.

Total length 410 millim.; tail 70.

Ceylon.

- a. ♂ (V. 125; C. 33). Ceylon. (Type.)  
 b. ♀ (V. 150; C. 20). District of Dimbola. Col. Beddome [C.].

### 3. *Aspidura guentheri*. (PLATE XX. fig. 3.)

*Aspidura guentheri*, *Ferguson, Proc. Zool. Soc.* 1876, p. 819; *Boulenger, Faun. Ind., Rept.* p. 290 (1890).

Rostral small, deeper than broad, not visible from above; frontal as long as or slightly longer than its distance from the end of the snout, two thirds the length of the parietals; supraocular about half the length of the frontal; præfrontals in contact with the second and third upper labials, entering the eye; a præocular; two postoculars, only the upper in contact with the parietal; temporals 1+2; six upper labials, first and second very small, sixth largest, fourth entering the eye; four lower labials in contact with the anterior chin-shields; posterior chin-shields small and scale-like. Scales in 17 rows, all perfectly small. Ventrals 101-117; anal entire; subcaudals 19-27. Dark brown above and below, back with four longitudinal series of blackish dots; head paler above; a yellow nuchal collar, interrupted in the middle and bordered with blackish posteriorly.

Total length 150 millim.; tail 20.

Ceylon.

- a. Many specs., ♂ (V. 109, 110, 110, 106, 106; C. 26, 25, 27, 26, 25), ♀ (V. 111, 117, 108, 110, 107; C. 22, 21, 23, 20, 19), & yg. (V. 101, 105; C. 25, 24). Ceylon, near the coast. W. Ferguson, Esq. [P.]. (Types.)  
 b, c-d. ♀ (V. 107, 110, 108; C. 24, 22, 24). Ceylon. Col. Beddome [C.].

4. *Aspidura trachyrocta*.

*Aspidura brachyorrhos*, part., *Günth. Cat.* p. 14 (1858).

— *trachyrocta*, *Cope, Proc. Ac. Philad.* 1860, p. 75; *Günth. Rept. Brit. Ind.* p. 203, pl. xviii. fig. F (1864); *Theob. Cat. Rept. Brit. Ind.* p. 143 (1876); *Bouleng. Faun. Ind., Rept.* p. 290 (1890).

— *scytale*, part., *Jan, Arch. Zool. Anat. Phys.* ii. 1862, p. 29, and *Icon. Gén.* 13, pl. ii. figs. 1-3 (1865).

Rostral small, deeper than broad, not visible from above; frontal longer than its distance from the end of the snout, about two thirds the length of the parietals; supraoculars more than half the length of the frontal; præfrontals in contact with the eye and with the second and third upper labials, separated from the fourth by a small præocular; two postoculars, lower largest, both in contact with the parietal; temporals 1+2; six upper labials, first and second very small, sixth largest, fourth entering the eye; four lower labials in contact with the anterior chin-shields; posterior chin-shields small and scale-like. Scales in 15 rows, tubercularly keeled on the anal and caudal regions. Ventrals 120-147; anal entire; subcaudals 13-25. Brown or blackish above, with longitudinal series of small darker spots and a dark lateral streak, which are more distinct in the young; lower surface blackish, or yellowish spotted with black.

Total length 400 millim.; tail 30.

Ceylon.

- |   |         |                               |
|---|---------|-------------------------------|
| <i>a, b.</i> ♂ (V. 139; C. 24) & ♀ (V. 140; C. 16).   | Ceylon. | Dr. Kelaart.                  |
| <i>c, d.</i> Many specs.: ♂ (V. 137, 138, 136, 125; C. 23, 25, 21, 23), ♀ (V. 128, 127, 125; C. 18, 15, 17), & yg. (V. 144, 139, 141, 135, 120; C. 15, 14, 22, 23, 24). | Ceylon. |                               |
| <i>e, f.</i> ♀ (V. 139, 142; C. 13, 11).  | Ceylon. |                               |
| <i>f-g.</i> ♂ (V. 144, 139; C. 24, 24).   | Ceylon. | B. H. Barnes, Esq. [P.].      |
| <i>h.</i> Yg. (V. 147; C. 23).  | Ceylon. | G. H. K. Thwaites, Esq. [P.]. |

## 34. BLYTHIA.

*Blythia*, *Theobald, Cat. Rept. As. Soc. Mus.* p. 44 (1868); *Bouleng. Faun. Ind., Rept.* p. 287 (1890).

Maxillary teeth about 20, subequal; posterior mandibular teeth much shorter than the anterior. Head not distinct from neck; eye small, with vertically subelliptic pupil; nostril between two small nasals and the first labial; no loreal or præocular. Body cylindrical; scales smooth, in 13 rows, without apical pits; ventrals rounded. Tail short, subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Khasi Hills, N. India.

1. *Blythia reticulata*.

*Calamaria reticulata*, *Blyth, Journ. As. Soc. Beng.* xxiii. 1854, p. 287.

*Blythia reticulata*, *Theob. Cat. Rept. As. Soc. Mus.* p. 44 (1868), and *Cat. Rept. Brit. Ind.* p. 142 (1876); *Bouleng. Faun. Ind., Rept.* p. 287, fig. (1890).

Rostral about as broad as deep, visible from above; suture between the internasals one half to two thirds as long as that between the præfrontals; frontal longer than its distance from the end of the snout, about two thirds the length of the parietals; one post-ocular and one elongate temporal; six upper labials, third and fourth entering the eye, first smallest, sixth largest; four lower labials in contact with the anterior chin-shields; posterior chin-shields small. Scales in 13 rows. Ventrals 127-150; anal divided; subcaudals 19-29. Blackish brown above and below, the lateral scales and the ventrals edged with lighter.

Total length 420 millim.; tail 40.

Khasi Hills.

*a-h.* ♂ (V. 138, 150, 127, 129; Khasi Hills. T. C. Jerdon, Esq. [P.] C. 27, 29, 26, 28), ♀ (V. 146, 138, 141; C. 23, 19, 24), & yg. (V. 132; C. 20).

35. *PSEUDOXYRHOPUS*.

*Homalocephalus* (*non Zett.*), *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 286.

*Pseudoxyrhopus*, *Günth. Ann. & Mag. N. H.* (5) vii. 1881, p. 359; *Bouleng. Ann. & Mag. N. H.* (6) vi. 1890, p. 311.

Maxillary teeth 16 to 18, the two posterior strongly enlarged and separated from the preceding by an interspace; anterior mandibular teeth much larger than the posterior and increasing in size to the fifth, sixth, or eighth. Head scarcely distinct from neck; eye small, with round pupil. Body cylindrical; scales smooth, without pits, in 17 to 25 rows; ventrals rounded. Tail rather short; subcaudals all or part in two rows. Hypapophyses developed throughout the vertebral column.

Madagascar.

*Synopsis of the Species.*

- |  |                                     |
|--|-------------------------------------|
| I. Scales in 25 rows . . . . .   | 1. <i>microps</i> , p. 315.         |
| II. Scales in 21 rows  |                                     |
| Rostral just visible from above . . . . .  | 2. <i>heterurus</i> , p. 315.       |
| Portion of rostral visible from above at least half as long as its distance from the frontal . . . . . | 3. <i>quinquelineatus</i> , p. 315. |
| III. Scales in 19 rows . . . . .   | 4. <i>imerinæ</i> , p. 316.         |
| IV. Scales in 17 rows . . . . .  | 5. <i>punctatus</i> , p. 317.       |





Snout prominent, subuneiform. Rostral broader than deep, the portion visible from above at least half as long as its distance from the frontal; internasals shorter than the præfrontals; frontal a little longer than broad, as long as its distance from the end of the snout, a little shorter than the parietals; loreal longer than deep; one præ- and two postoculars; temporals 1+2, the anterior in contact with the lower postocular only; eight upper labials, fourth and fifth entering the eye; four lower labials in contact with the anterior chin-shields, which are as long as the posterior. Scales in 21 rows. Ventrals 142; anal divided; subcaudals 45-47. Brown above; a broad margin round the upper jaw yellowish, both colours being divided by a sharply-defined line; five blackish lines along the body; a few brown spots on the labials; lower parts uniform yellowish.

Total length 490 millim.; tail 85.

Madagascar.

a-b. ♂ (V. 142; C. 47) & ♀  
(V. 142; C. 45).

Betsileo.

Mr. T. Waters [C.].  
(Types.)

#### 4. *Pseudoxyrhopus imerinæ*.

*Coronella microps*, *Bouleng. Ann. & Mag. N. II* (6) i. 1888, p. 104, pl. v. fig. 4.

*Liophis imerinæ*, *Günth. Ann. & Mag. N. II* (6) v. 1890, p. 71.

*Pseudoxyrhopus imerinæ*, *Bouleng. Ann. & Mag. N. II* (6) vi. 1890, p. 313, fig.

Rostral broader than deep, the portion visible from above about half as long as its distance from the frontal; suture between the internasals a little shorter than that between the præfrontals; frontal about once and a half as long as broad, longer than its distance from the end of the snout, shorter than the parietals; loreal a little longer than deep; one præ- and two (rarely three) postoculars; temporals 1+2, the anterior in contact with the lower postocular only, rarely 2+3; eight upper labials, fourth and fifth, or third, fourth, and fifth, entering the eye; four lower labials in contact with the anterior chin-shields, which are as long as the posterior. Scales in 19 rows. Ventrals 137-148; anal divided; subcaudals 40-47. Young pale brown above, with six or eight dark brown longitudinal lines, the median pair bordering a band of darker brown than the ground-colour; upper surface of head with dark brown variegations; a dark brown streak on each side of the head, passing through the eye, bordered below by a white streak; upper lip dark brown; throat brown, with white markings; belly pale brown, each shield with a darker anterior margin. Adult with the dorsal markings more or less distinct, and the belly nearly black.

Total length 460 millim.

Madagascar.

<i>a-b.</i> Yg. (V. 143, 137 ; C. 47, 40).	Madagascar.	Rev. R. Baron [C.] (Types of <i>C. microps</i> .)
<i>c.</i> ♀ (V. 146 ; C. ?).	Imerina.	Rev. J. Wills [C.] (Type of <i>L. imerinae</i> .)
<i>d.</i> ♀ (V. 148 ; C. 43).	East Imerina.	Rev. R. Baron [C.]

### 5. *Pseudoxyrhopus punctatus*.

*Xenodon punctatus*, *Peters, Mon. Berl. Ac.* 1880, p. 221, pl. —  
fig. 3.

*Pseudoxyrhopus punctatus*, *Bouleng. Ann. & Mag. N. H.* (6) vi.  
1890, p. 313.

Eye small. Rostral just visible from above ; internasals as long as the præfrontals ; frontal a little longer than broad, longer than its distance from the end of the snout, shorter than the parietals ; loreal small, deeper than long ; one præ- and two postoculars ; temporals 1+2, anterior in contact with both postoculars ; eight upper labials, third, fourth, and fifth entering the eye ; four lower labials in contact with the anterior chin-shields, which are a little shorter than the posterior. Scales in 17 rows. Ventrals 162 ; anal divided ; subcaudals 42. Dark brown above, with longitudinal lines of black dots ; a white line along the upper labials ; lower parts white, ventrals black on the sides and with a median black spot here and there.

Total length 170 millim. ; tail 26.

Brazil (?).

## 36. LYCOGNATHOPHIS.

*Psammophis*, part., *Schleg. Phys. Serp.* ii. p. 201 (1837).

*Tropidonotus*, part., *Dum. & Bibr. Exp. Gén.* vii. p. 549 (1854) ;  
*Jan, Arch. Zool. Anat.* iii. 1865, p. 203.

Maxillary teeth large, subequal, 20-22 ; anterior mandibular teeth very large, much larger than the posterior. Head very distinct from neck ; eye moderate, with vertically elliptic pupil ; no loreal shield. Body much elongate, rounded ; scales keeled, with apical pits, in 17 rows ; ventrals rounded. Tail long ; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Seychelles.

### 1. *Lycognathophis sechellensis*.

*Psammophis sechellensis*, *Schleg. Phys. Serp.* ii. p. 212 (1837), and  
*Abbild.* pl. xliii. figs. 9-14 (1844).

*Tropidonotus sechellensis*, *Dum. & Bibr.* vii. p. 588 (1854) ; *Jan,*  
*Arch. Zool. Anat. Phys.* iii. 1865, p. 226 ; *Günth. Zool. Rec.* 1869,  
p. 116.

*Thrasops citrinus*, *Cope, Proc. Ac. Philad.* 1868, p. 322.

Rostral at least twice as broad as deep, not visible from above ;

internasals a little longer than broad, a little shorter than the præfrontals; frontal once and two thirds to twice as long as broad, as long as its distance from the end of the snout, shorter than the parietals; no loreal, præfrontal in contact with the second and third labials; one præ- and two or three postoculars; temporals 1+2; nine upper labials, fourth, fifth, and sixth entering the eye; five lower labials in contact with the anterior chin-shields, which are much shorter than the posterior. Scales in 17 rows, all strongly keeled. Ventrals 184-202; anal divided; subcaudals 92-110. Yellowish or greyish brown above, uniform or with dark brown spots; a more or less distinct dark streak on each side of the head, passing through the eye; upper lip yellowish, usually with brown dots; hinder part of body usually with four series of brown spots, which become confluent into stripes on the tail; lower parts yellowish, usually more or less profusely powdered or dotted with brown; a more or less marked brown spot at the outer end of the anterior ventrals.

Total length 1000 millim.; tail 310.

Seychelles.

- α-c, d, e-g.* ♂ (V. 190; C. ?), Seychelles. Prof. E. P. Wright [C.].  
 ♀ (V. 197, 202, 193; C. 104,  
 101, 108), & yg. (V. 196, 189,  
 185; C. ? 92, 109).  
*h.* Hgr. (V. 185; C. 99). Seychelles. Sir J. Kirk [P.].  
*i.* Skull. Seychelles.

### 37. ABLABOPHIS.

Coronella, part., *Schleg. Phys. Serp.* ii. p. 50 (1837).

Lamprophis, part., *Smith. Ill. Zool. S. Afr., Rept.* (1847); *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 284.

Ablabes, part., *Dum. & Bibr. Erp. Gén.* vii. p. 304 (1854); *Günth. Cat. Col. Sn.* p. 27 (1858).

Maxillary teeth small, equal, 20 to 25; anterior mandibular teeth longest. Head slightly distinct from neck; eye moderate, with vertically elliptic pupil. Body cylindrical; scales smooth, with apical pits, in 19 rows; ventrals rounded. Tail moderate; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

South Africa.

#### 1. *Ablabophis rufulus.*

Coronella rufula, *Licht. Verz. Doubl. Mus. Berl.* p. 105 (1823); *Schleg. Phys. Serp.* ii. p. 74, pl. ii. figs. 18 & 19 (1837).

— leucopilus, *Smith, S. Afr. Quart. Journ.* (1) no. 5, 1831, p. 17.

Lamprophis rufulus, *Smith, Ill. Zool. S. Afr., Rept.* pl. lviii. (1847); *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 285, and *Icon. Gén.* 17, pl. iv. fig. 1 (1866).

Ablabes rufulus, *Dum. & Bibr.* vii. p. 308 (1854); *Günth. Cat.* p. 30 (1858).

Rostral broader than deep, just visible from above; internasals shorter than the præfrontals; frontal once and a half to once and two thirds as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal longer than deep; one (rarely two) præ- and two postoculars; temporals 1+2; eight upper labials, fourth and fifth entering the eye; four lower labials in contact with the anterior chin-shields, which are as long as or a little longer than the posterior. Scales in 19 rows. Ventrals 158-179; anal entire; subcaudals 55-81. Uniform dark olive-brown above; upper lip and lower parts yellowish white.

Total length 700 millim.; tail 135.

South Africa.

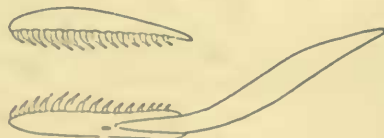
- |  |                      |                              |
|--|----------------------|------------------------------|
| a-c. ♂ (V. 167; C. 74) &<br>♀ (V. 164, 159; C. 58,<br>57). | Cape of Good Hope.   | J. P. M. Weale, Esq.<br>[P.] |
| d. Hgr. (V. 179; C. 72).                                   | Cape Colony.         | H. Trevelyan, Esq.<br>[P.]   |
| e. Hgr. (V. 175; C. 70).                                   | King William's Town. | Rev. H. Calloway<br>[P.]     |
| f. ♂ (V. 173; C. 60).                                      | Port Natal.          | Mr. T. Ayres [C.]<br>[P.]    |
| g. ♀ (V. 175; C. 69).                                      | Port Natal.          | W. L. Distant, Esq.<br>[P.]  |
| h-i. ♀ (V. 175; C. 70) &<br>yg. (V. 169; C. 70).           | Pretoria, Transvaal. | C. Beddington, Esq.<br>[P.]  |
| k. ♂ (V. 171; C. ?).                                       | Matabele-land.       |                              |
| l. Skull.  | Cape of Good Hope.   |                              |

### 38. TETRALEPIS.

*Tetralepis*, *Boettger*, *Ber. Offenb. Ver. Nat.* 1892, p. 124.

Maxillary teeth 14, third to eighth longest, the six last gradually decreasing in size; mandibular teeth increasing in size to the fifth, posterior very small. Head small, not distinct from neck; eye rather small, with round pupil; nasal single. Body cylindrical;

Fig. 18.



Maxillary and mandible of *Tetralepis fruhstorferi*.

scales smooth, without pits, in 15 rows; ventrals rounded. Tail rather short; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Java.



1. *Tetralepis fruhstorferi*.

*Tetralepis fruhstorferi*, *Boettg. l. c.* p. 125.

Rostral broader than deep, just visible from above; suture between the internasals considerably longer than that between the præfrontals; frontal once and one third as long as broad, slightly longer than its distance from the end of the snout, considerably shorter than the parietals; nasal rather large, twice as long as deep; loreal as long as deep; one præ- and two postoculars; temporals 1+2 or 1+1+2, anterior elongate; four upper labials, third entering the eye, fourth very long; four lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 15 rows. Ventrals 199-201; anal divided; subcaudals 43. Dark reddish brown above, with an indistinct darker vertebral line; lower surface plumbeous or reddish grey.

Total length 502 millim.; tail 70.

Tengger Mts., Java, 4000 feet.

## 39. LAMPROPHIS.

Duberria, part., *Fitzing. N. Class. Rept.* p. 29 (1826).

Coronella, part., *Schleg. Phys. Serp.* ii. p. 50 (1837).

Lamprophis, part., *Smith, Ill. Zool. S. Afr., Rept.* (1847); *Dum. & Bibr. Erp. Gén.* vii. p. 427 (1854); *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 284.

Lamprophis, *Günth. Cat. Col. Sn.* p. 195 (1858); *Cope, Proc. Ac. Philad.* 1864, p. 168.

Maxillary teeth small, 15 to 18, anterior longest; anterior mandibular teeth strongly enlarged. Head small, not distinct from

Fig. 19.



Maxillary and mandible of *Lamprophis aurora*.

neck; eye moderate, with vertically subelliptic pupil. Body cylindrical; scales smooth, without pits, in 19 to 23 rows; ventrals rounded. Tail short, subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

South Africa.

*Synopsis of the Species.*

I. Scales in 23 rows.

Internasals a little shorter than the præfrontals; loreal a little longer than deep; two pairs of chin-shields . . . . . 1. *aurora*, p. 321.

- Internasals much shorter than the præfrontals; loreal at least twice as long as deep; two pairs of chin-shields . . . . . 2. *inornatus*, p. 321.
- Internasals longer than the præfrontals; loreal a little longer than deep; a single pair of chin-shields . . . . . 3. *fishii*, p. 322.
- II. Scales in 19 rows . . . . . 4. *fuscus*, p. 322.

### 1. *Lamprophis aurora*.

- Coluber aurora*, *Linn. Mus. Ad. Frid.* p. 25, pl. xix. fig. 1 (1754), and *S. N. i.* p. 379 (1766); *Daud. Rept.* vii. p. 5 (1803).  
*Cerastes aurora*, *Laur. Syn. Rept.* p. 82 (1768).  
*Duberria aurora*, *Fitz. N. Class. Rept.* p. 56 (1826).  
*Coronella aurora*, *Schleg. Phys. Serp.* ii. p. 75, pl. ii. figs. 20 & 21 (1837).  
*Lamprophis aurora*, *Smith, Ill. Zool. S. Afr., Rept., App.* p. 19 (1849); *Dum. & Bibr.* vii. p. 431 (1854); *Günth. Cat.* p. 195 (1858).

Rostral broader than deep, scarcely visible from above; internasals a little shorter than the præfrontals; frontal once and one third to once and a half as long as broad, as long as or a little longer than its distance from the end of the snout, shorter than the parietals; loreal a little longer than deep; one præocular, not extending to the frontal; two postoculars; temporals 1+2; eight upper labials, fourth and fifth, or third, fourth, and fifth, entering the eye; four lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales in 23 rows. Ventrals 170-182; anal entire; subcaudals 37-53. Olive or pale brown above, uniform or speckled with black; the scales of the vertebral series bright yellow or orange; lower parts white.

Total length 650 millim.; tail 120.

South Africa.

a. ♂ (V. 178; C. 50).	Cape of Good Hope.	Dr. Statham [P.].
b. ♀ (V. 182; C. 37).	Cape of Good Hope.	Dr. Lee [P.].
c, d. ♂ (V. 179; C. 52) & yg. (V. 170; C. 51).	Cape of Good Hope.	
e. ♂ (V. 177; C. 52).	Cape Town.	Rev. G. H. R. Fisk [P.].
f. Yg. (V. 172; C. 51).	King William's Town.	H. Trevelyan, Esq. [P.].
g. Yg. (V. 172; C. 51).	Orange River.	Dr. Kannemeyer [P.].
h. Skull.	Cape of Good Hope.	

### 2. *Lamprophis inornatus*.

*Lamprophis inornatus*, *Dum. & Bibr.* vii. p. 464 (1854).

Eye smaller than in *L. aurora*. Internasals much shorter than

the præfrontals; frontal once and a half as long as broad, longer than its distance from the end of the snout; loreal nearly thrice as long as deep; fourth and fifth upper labials entering the eye; two pairs of equal chin-shields. Scales in 23 rows. Ventrals 170; anal entire; subcaudals 54-61. Uniform brown above, brownish white inferiorly.

Total length 260 millim.; tail 45.

Cape of Good Hope.

a. Hgr. (V. 170; C. 61). Cape of Good Hope. Dr. Lee [P.].

### 3. *Lamprophis fiskii*.

*Lamprophis fiski*, *Bouleng. Proc. Zool. Soc.* 1887, p. 398, pl. xxxiv.

Rostral broader than deep, not visible from above; internasals longer than the præfrontals; frontal once and one fourth as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal a little longer than deep; one præocular, not touching the frontal; two postoculars; temporals 1+2; eight upper labials, fourth and fifth entering the eye; a single pair of chin-shields, in contact with four lower labials. Scales in 23 rows. Ventrals 178; anal entire; subcaudals 35. Lemon-yellow on the five median rows of scales, with large blackish-brown spots forming a single series anteriorly, a double alternating series posteriorly; head lemon-yellow above, with symmetrical blackish-brown markings, viz. an oblique band on each side of the occiput, a horseshoe-shaped band passing through the eyes and across the snout, and a bar across the frontal; lateral scales of body and tail brown in the centre and yellowish white on the borders; upper lip and lower parts white.

Total length 315 millim.; tail 38.

South Africa.

a. Hgr. (V. 178; C. 35). Touw's River. Rev. G. H. R. Fisk [P.].  
(Type.)

### 4. *Lamprophis fuscus*. (PLATE XX. fig. 4.)

Rostral broader than deep, just visible from above; internasals half as long as the præfrontals; frontal once and one third as long as broad, a little longer than its distance from the end of the snout, as long as the parietals; loreal a little longer than deep; one præ- and two postoculars; temporals 1+2; seven upper labials, third and fourth entering the eye; two pairs of very short chin-shields, the anterior in contact with four lower labials. Scales in 19 rows. Ventrals 198; anal entire; subcaudals 58. Uniform brown above; upper lip, two outer rows of scales, and lower parts yellowish.

Total length 560 millim.; tail 100.

Cape of Good Hope.

a. ♂ (V. 198; C. 58). Cape of Good Hope.

## 40. GONIONOTOPHIS.

Gonionotus (*non Gray*), *Mocquard, Bull. Soc. Philom.* (8) i. 1889, p. 146.

Maxillary teeth 26, anterior but slightly longer than the others; anterior mandibular teeth likewise slightly longer. Head scarcely distinct from neck, much depressed; eye small, with vertically elliptic pupil; nostril large; præocular present or absent. Body cylindrical; scales keeled, with apical pits, in 15 or 21 rows, those of the middle row enlarged and bicarinate; ventrals rounded or obtusely angulate laterally. Tail moderate; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Tropical Africa.

*Synopsis of the Species.*

- |   |                               |
|---|-------------------------------|
| <p>Scales strongly keeled, in 21 rows; temporals<br/>2+2.....</p> | 1. <i>brussauxi</i> , p. 323. |
| <p>Scales strongly keeled, in 21 rows; temporals<br/>1+2.....</p> | 2. <i>vossii</i> , p. 323.    |
| <p>Scales feebly keeled, in 15 rows; temporals<br/>1+2.....</p>   | 3. <i>grantii</i> , p. 324.   |

1. *Gonionotophis brussauxi*.

*Gonionotus brussauxi*, *Mocquard, l. c.* p. 146, pl. ii.

Rostral twice as broad as deep, scarcely visible from above; internasals very short; frontal as broad as long, as long as its distance from the end of the snout, much shorter than the parietals; supraocular very small; loreal more than twice as long as deep; no præocular, the loreal and the præfrontal entering the eye; two postoculars; temporals 2+2; eight upper labials, fourth and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales in 21 rows, strongly keeled, the vertebral sharply bicarinate on the posterior half of the body. Ventrals 176; anal single; subcaudals 73. Blackish brown above, dirty yellow beneath.

Total length 440 millim.; tail 118.

Loudinia-Niari, Congo.

2. *Gonionotophis vossii*.

*Gonionotus vossi*, *Boettg. Zool. Anz.* 1892, p. 418.

Closely allied to the preceding, but head shorter, præfrontals not longer than broad, and temporals 1+2. Scales in 21 rows, the vertebral sharply bicarinate throughout the body. Ventrals 175; anal single; subcaudals 76.

Total length 454 millim.; tail 110.

Cameroons.



### 3. *Gonionotophis grantii*. (PLATE XXIII. fig. 1.)

*Simocephalus grantii*, *Günth. Ann. & Mag. N. H.* (3) xii. 1863, p. 361.

*Gonionotus grantii*, *Bouleng. Ann. & Mag. N. H.* (6) viii. 1891, p. 345.

Rostral nearly twice as broad as deep, scarcely visible from above; internasals very short; frontal as broad as long, not quite as long as its distance from the end of the snout, much shorter than the parietals; supraocular very small; loreal twice as long as deep; one præ- and one or two postoculars; temporals 1+2; seven upper labials, third and fourth entering the eye, fifth sometimes in contact with the parietal; five lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales rather feebly keeled, lower row smooth, in 15 rows (19 on the neck). Ventrals 167; anal entire; subcaudals 67. Blackish brown above, the scales edged with lighter, yellowish beneath.

Total length 410 millim.; tail 90.

West Africa.

*a-b.* ♂ (V. 167, 167; C. 67, ?). W. Africa. Prof. Grant [P.].  
(Types.)

### 41. *BOTHROPTHALMUS*.

*Bothrophthalmus*, *Peters, Mon. Berl. Ac.* 1863, p. 287; *Jan, Elenco sist. Ofid.* p. 57 (1863).

Maxillary teeth 23, anterior longest; anterior mandibular teeth longest. Head distinct from neck; eye moderate, with round pupil; loreal region with a deep concavity. Body cylindrical, elongate; scales strongly keeled, without pits, in 23 rows; ventrals rounded. Tail moderate; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Tropical Africa.

#### 1. *Bothrophthalmus lineatus*.

*Elaphis* (*Bothrophthalmus*) *lineatus*, *Peters, Mon. Berl. Ac.* 1863, p. 287.

*Bothrophthalmus brunneus*, *Günth. Ann. & Mag. N. H.* (3) xii. 1863, p. 356, pl. vi. fig. E; *F. Müll. Verh. nat. Ges. Basel*, vii. 1885, p. 680.

— *melanozostus*, *Jan, Elenco*, p. 62 (1863), and *Icon. Gén.* 20, pl. v. (1867).

— *lineatus*, var. *infuscatus*, *Buchh. & Peters, Mon. Berl. Ac.* 1875, p. 193.

— *modestus*, *Fischer, Abh. naturw. Ver. Hamb.* ix. 1886, p. 13.

— *lineatus*, *Boettg. Ber. Senck. Ges.* 1887-88, p. 50.

Rostral broader than deep, just visible from above; internasals much shorter than the præfrontals; frontal once and a half to once and two thirds as long as broad, at least twice as broad as the

supraocular, as long as or slightly longer than its distance from the end of the snout, as long as the parietals; loreal elongate, separated from the eye by the lower præocular; two (or three) præoculars, upper largest; two postoculars; temporals 2+3; seven or eight upper labials, fourth and fifth entering the eye; four lower labials in contact with the anterior chin-shields, which are as long as or longer than the posterior. Scales strongly keeled, in 23 rows. Ventrals 190-205; anal entire; subcaudals 64-82. Head yellowish or reddish brown, with black spots and two pairs of oblique black lines, the outer passing through the eye; body blackish brown, uniform, or with yellow lines; lower parts uniform yellowish.

Total length 920 millim.; tail 165.

West and Central Africa.

A. Uniform blackish brown above.

a. ♀ (V. 205; C. 75). Fernando Po. (Type of *B. brunneus*.)

B. With five yellowish longitudinal streaks, which are narrower than the interspaces.

b. ♀ (V. 195; C. 69). Oil River, W. Africa. H. H. Johnston, Esq.

c. ♀ (V. 194; C. 64). Akassa, mouth of Niger. Dr. J. W. Crosse [P.].

d. Hgr. (V. 190; C. 66). Semao, C. Africa. Hr. Bohndorff [C.].

C. With five yellowish longitudinal streaks, which are as broad as the interspaces.

e. ♀ (V. 202; C. 74). Ashantee. Mr. McCarthy [C.].

## 42. BOTHROLYCUS.

*Bothrolycus*, Günth. *Proc. Zool. Soc.* 1874, p. 444.

Maxillary teeth 20, forming a continuous series, the six anterior strongly enlarged; anterior mandibular teeth strongly enlarged.

Fig. 20.



Maxillary and mandible of *Bothrolycus ater*.

Head distinct from neck; eye rather small, with round pupil; loreal region deeply concave, the pit entering the eye. Body short, cylindrical; scales smooth, without apical pits, in 19 rows; ventrals rounded. Tail very short; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

West Africa.

1. *Bothrolycus ater*.

*Bothrolycus ater*, *Gunth. l. c.* pl. lviii. fig. B.

Snout projecting, obliquely truncate; loreal region vertical. Rostral a little broader than deep, not visible from above; internasals much shorter than the prefrontals; frontal once and a half as long as broad, as long as its distance from the end of the snout, as long as the parietals; loreal elongate, entering the eye; two postoculars; temporals 1+2; seven upper labials, third, fourth, and fifth entering the eye; four lower labials in contact with the anterior chin-shields, which are as long as or a little longer than the posterior. Scales in 19 rows. Ventrals 147-148; anal entire; subcaudals 18-22. Blackish brown above, head paler; pale brown inferiorly, with whitish dots or short streaks; lips and chin with a few whitish, black-edged dots.

Total length 460 millim.; tail 40.

Cameroons.

- |                       |            |                              |
|-----------------------|------------|------------------------------|
| a. ♀ (V. 147; C. 22). | Cameroons. | (Type.)                      |
| b. ♀ (V. 148; C. 18). | Cameroons. | D. G. Rutherford, Esq. [C.]. |

43. *CYCLOCORUS*.

*Cyclocorus*, *Dum. & Bibr. Mém. Ac. Sc.* xxiii. 1853, p. 460, and *Erp. Gén.* vii. p. 385 (1854); *Gunth. Cat. Col. Sn.* p. 208 (1858); *Jan, Elenco sist. Ofid.* p. 95 (1863).

Maxillary and dentary bones angularly bent inwards anteriorly; three or four anterior teeth, in both jaws, increasing in size, the last large and fang-like, followed after an interspace by 12 or 13

Fig. 21.



Maxillary and mandible of *Cyclocorus lineatus*.

small maxillary teeth. Head slightly distinct from neck; eye rather small, with round pupil. Body moderately elongate, cylindrical; scales smooth, with apical pits, in 17 rows; ventrals rounded. Tail moderate; subcaudals single. Hypapophyses developed throughout the vertebral column.

Philippine Islands.

1. *Cyclocorus lineatus*.

*Lycodon lineatus*, *Reinh. Dansk. Vid. Selsk. Afh.* x. 1843, p. 241, pl. i. figs. 7-9.

*Cyclocorus lineatus*, *Dum. & Bibr.* vii. p. 386 (1854); *Günth. Cat.* p. 208 (1858); *Jan, Icon. Gén.* 36, pl. vi. fig. 2 (1870).

Rostral nearly twice as broad as deep, scarcely visible from above; internasals shorter than the præfrontals; frontal once and two thirds to twice as long as broad, longer than its distance from the end of the snout, much shorter than the parietals; loreal as long as deep or a little longer; two præ- and two postoculars; temporals 2+2 or 2+3; eight upper labials, third, fourth, and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are as long as or a little longer than the posterior. Scales in 17 rows. Ventrals 142-156; anal entire; subcaudals 40-53. Brown above, with three darker longitudinal streaks, the middle of which widens on the head; a lateral series of light dots may be present; lower parts yellowish, uniform or with triangular black spots; a series of triangular black spots along each side of the belly and tail.

Total length 520 millim.; tail 105.

Philippines.

- |  |              |                       |
|--|--------------|-----------------------|
| <p><i>a-d.</i> ♀ (V. 153; C. 47) &amp;<br/>hgr. (V. 142, 143, 144;<br/>C. 49, 53, 48).</p> | Philippines. | H. Cuming, Esq. [C.]. |
| <p><i>e.</i> ♂ (V. 144; C. 52).</p>  | Philippines. | Purchased.            |

## 44. BOODON.

*Lycodon*, part., *Boie, Isis*, 1827, p. 521; *Schleg. Phys. Serp.* ii. p. 104 (1837).

*Boodon*, *Dum. & Bibr. Mém. Ac. Sc.* xxiii. 1853, p. 460, and *Erp. Gén.* vii. p. 357 (1854); *Jan, Elenco sist. Ofid.* p. 95 (1863).

*Alopecion*, *Dum. & Bibr. ll. cc.* pp. 462, 416.

*Eugnathus*, *Dum. & Bibr. Erp. Gén.* vii. p. 404.

*Holuropholis*, *A. Dum. Rev. et Mag. Zool.* 1856, p. 465; *Günth. Cat. Col. Su.* p. 200 (1858); *Jan, l. c.* p. 98.

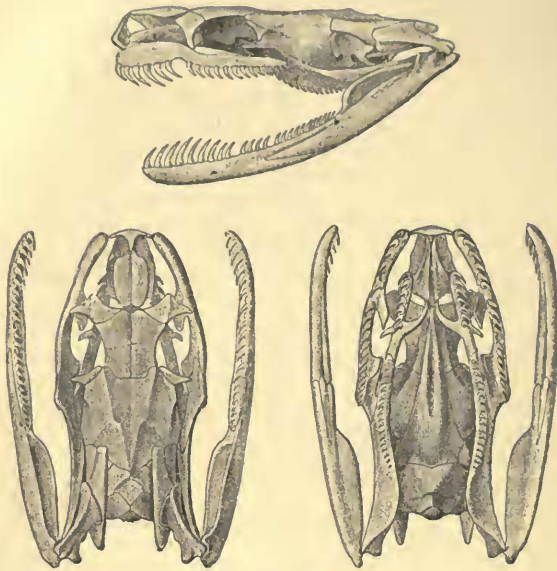
*Boodon*, *Günth. l. c.* p. 198; *Peters, Reise n. Mossamb.* iii. p. 133 (1882).

The five or six anterior maxillary teeth enlarged, forming a slightly interrupted series with the remainder; 18 to 24 maxillary teeth altogether; anterior mandibular teeth strongly enlarged. Head not or but slightly distinct from neck, more or less depressed; eye small or moderate, with vertically elliptic pupil. Body cylindrical; scales smooth, with apical pits, in 21 to 31 rows; ventrals rounded. Tail short or moderate; subcaudals in two rows or single. Hypapophyses developed throughout the vertebral column.

Tropical and South Africa.



Fig. 22.



Skuli of *Boodon olivaceus*.

*Synopsis of the Species.*

I. Subcaudals in two rows.

A. Præocular not extending to upper surface of head; usually, three labials entering the eye.

1. Scales in 21 or 23 rows; rostral about once and a half as broad as deep.

Frontal as long as parietals ..... 1. *lemniscatus*, p. 329.

Frontal shorter than parietals ..... 2. *geometricus*, p. 329.

2. Scales in 23 or 25 rows; rostral nearly twice as broad as deep ..... 3. *infernalis*, p. 330.

B. Præocular extending to upper surface of head, and often in contact with the frontal.

1. Scales in 23 rows:

Subcaudals 47-61 ..... 4. *virgatus*, p. 331.

Subcaudals 72 ..... 5. *guttatus*, p. 331.

## 2. Scales in 25 to 31 rows.

a. Two pairs of chin-shields, in contact with each other.

Parietal shields longer than the distance  
between the frontal and the end of  
the snout . . . . . 6. *lineatus*, p. 332.

Parietal shields as long as the distance  
between the frontal and the end of  
the snout . . . . . 7. *fuliginosus*, p. 334.

b. Only one pair of chin-shields meeting on the median line.

8. *mentalis*, p. 335.II. Subcaudals single . . . . . 9. *olivaceus*, p. 335.1. *Boodon lemniscatus*.

*Boodon lemniscatum*, *Dum. & Bibr.* vii. p. 365 (1854); *Jan, Icon. Gén.* 36, pl. iii. fig. 1 (1870); *Blanf. Geol. & Zool. Abyss.* p. 457 (1870).

Eye small. Rostral broader than deep, scarcely visible from above; internasals subtriangular, shorter than the præfrontals; frontal twice as long as broad, longer than its distance from the end of the snout, as long as the parietals; loreal longer than deep; one præocular, not extending to the upper surface of the head; two (or three) postoculars; temporals 1 + 2; eight upper labials, third, fourth, and fifth entering the eye; three or four lower labials in contact with the anterior chin-shields, which are much longer than the posterior. Scales in 21 or 23 rows. Ventrals 194-200; anal entire; subcaudals 41-60. Pale brown above; a dark vertebral band, extending to the end of the snout and forming a loop on the crown; a dark lateral band, three or four scales wide on the body, also extending to the end of the snout, passing through the eye; lower parts yellowish, with brown dots, which may form a streak along each side of the belly, and one along the middle of the tail.

Total length 800 millim.; tail 110.

Abyssinia.

a-b. ♂ (Sc. 21; V. 200; C. 55)	Ashangi.	W. T. Blanford, Esq.
& ♀ (Sc. 21; V. 197; C. 41).		[P.].
c. ♂ (Sc. 21; V. 194; C. 60).	Abyssinia.	W. Jesse, Esq. [C.].

2. *Boodon geometricus*.

*Lycodon geometricus*, *Schleg. Phys. Serp.* ii. p. 111 (1837).

*Eugnathus geometricus*, *Dum. & Bibr.* vii. p. 406 (1854).

*Boodon geometricum*, *Jan, Elenco*, p. 95 (1863), and *Icon. Gén.* 36, pl. iii. fig. 2 (1870); *Peters, Reise n. Mossamb.* iii. p. 134 (1882); *Bouleng. Ann. Mus. Genova* (2) xii. 1891, p. 14.

*Boodon seychellensis*, *Günth. Ann. & Mag. N. H.* (6) i. 1888, p. 330, pl. xviii. fig. C.

Eye rather small. Rostral broader than deep, just visible from

above; internasals much shorter than the præfrontals; frontal as long as or longer than its distance from the end of the snout, a little shorter than the parietals; loreal longer than deep; one præocular, not extending to the upper surface of the head; two postoculars; temporals 1+2; eight or nine upper labials, usually three of which enter the eye; four lower labials in contact with the anterior chin-shields, which are a little longer than the posterior. Scales in 21 or 23 rows; ventrals 194-207; anal entire; subcaudals 50-60. Brown above, with three more or less distinct darker longitudinal streaks; snout and sides of head pale, with a brown black-edged temporal streak, and another from below the eye to the mouth; lips with a few large brown spots; lower parts brown, chin and throat spotted with darker.

Total length 850 millim.; tail 135.

Seychelles.

- a-c. ♂ (Sc. 23, 23; V. 194, 194; Seychelles. Prof. E. P. Wright [P.].  
C. 59, 60) & ♀ (Sc. 23; V. 207; (Types of *B. seychellensis*).  
C. 52).

### 3. *Boodon infernalis*. (PLATE XXI. fig. 1.)

*Boodon infernalis*, *Günth. Cat.* p. 199 (1858).

Eye small. Rostral much broader than deep, not extending to the upper surface of the snout, forming a broad suture within the internasals, which are much shorter than the præfrontals; frontal once and a half to once and two thirds as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal at least twice as long as broad; one or two præoculars, not extending to the upper surface of the head; two (rarely one) postoculars; temporals 1+2; eight upper labials, third, fourth, and fifth entering the eye; four lower labials in contact with the anterior chin-shields, which are as long as the posterior, or a little longer. Scales in 23 or 25 rows. Ventrals 175-195; anal entire; subcaudals 48-70. Uniform dark olive or blackish all over, or lower parts yellowish.

Total length 790 millim.; tail 125.

East and South Africa.

- |   |                 |                            |            |
|---|-----------------|----------------------------|------------|
| a-b. ♂ (Sc. 23; V. 176; C. 54) & ♀ (Sc. 23; V. 179; C. 48). | Zanzibar.       | Capt. Speke [P.].          |            |
| c, d. ♂ (Sc. 23, 23; V. 176, 175; C. 59, ?).                | S. Africa.      | Haslar Collection.         | } (Types.) |
| e. ♂ (Sc. 25; V. 195; C. 70).                               | Port Natal.     | Rev. H. Calloway [P.].     |            |
| f. ♀ (Sc. 23; V. 194; C. 53).                               | Natal.          | E. Howlett, Esq. [P.].     |            |
| g. Hgr. (Sc. 25; V. 195; C. 54).                            | Port Elizabeth. | J. P. M. Weale, Esq. [P.]. |            |
| h. Hgr. (Sc. 25; V. 186; C. 51).                            | Damaraland.     |                            |            |

4. *Boodon virgatus*.

- Cœlopeltis virgata*, *Hallow. Proc. Ac. Philad.* 1854, p. 98.  
*Boodon nigrum*, *Fischer, Abh. naturw. Ver. Hamb.* iii. 1856, p. 91,  
 pl. iii. fig. 2; *A. Dum. Arch. Mus.* x. 1859, p. 194, pl. xvii. fig. 2;  
*Jan, Icon. Gén.* 36, pl. ii. fig. 5 (1870).  
 — quadrivirgatum, *Hallow. Proc. Ac. Philad.* 1857, p. 56.  
*Boodon geometricus*, part., *Günth. Cat.* p. 198 (1858).  
 — *virgatus*, *Cope, Proc. Ac. Philad.* 1860, p. 261; *Bouleng. Ann.*  
*Mus. Genova*, (2) xii. 1891, p. 14.  
 — *lineatus*, var. *nigra*, *Boettg. Ber. Senck. Ges.* 1887-88, p. 71.  
 — *ventralis*, *Günth. Ann. & Mag. N. H.* (6) i. 1888, p. 329,  
 pl. xviii. fig. A.

Eye moderate. Rostral broader than deep, just visible from above; internasals about half as long as the prefrontals; frontal once and a half to once and two thirds as long as broad, as long as or a little longer than its distance from the end of the snout, a little shorter than the parietals; loreal longer than deep; one or two præoculars, extending to the upper surface of the head and usually in contact with the frontal; two postoculars; temporals 1+2; eight upper labials, fourth and fifth entering the eye; four lower labials in contact with the anterior chin-shields, which are a little longer than the posterior. Scales in 23 rows. Ventrals 186-212; anal entire; subcaudals 47-61. Uniform blackish brown, except the middle line of the belly, which is yellowish; two yellowish lines on each side of the head, the lower passing through the eye.

Total length 850 millim.; tail 120.

West Africa.

- |  |                       |                             |                                       |
|--|-----------------------|-----------------------------|---------------------------------------|
| <i>a, b.</i> ♂ (V. 194; C. 59) &<br>♀ (V. 205; C. 52). | Old Calabar.          | — Logan, Esq.<br>[P.].      | } (Types of<br><i>B. ventralis</i> .) |
| <i>c.</i> Yg. (V. 186; C. 61).                         | Old Calabar.          |                             |                                       |
| <i>d.</i> ♂ (V. 202; C. ?).                            | Ashantee.             |                             |                                       |
| <i>e.</i> Yg. (V. 190; C. 56).                         | Interior of Ashantee. |                             |                                       |
| <i>f.</i> Hgr. ♂ (V. 206; C. 57).                      | W. Africa.            | J. C. Salmon,<br>Esq. [P.]. |                                       |
| <i>g.</i> ♂ (V. 200; C. 61).                           | W. Africa.            |                             |                                       |

5. *Boodon guttatus*.

- Lycodon guttatus*, *Smith, Ill. Zool. S. Afr., Rept.* pl. xxiii. (1843).  
*Alopecion annulifer*, *Dum. & Bibr.* vii. p. 416 (1854)\*; *Günth. Cat.*  
 p. 196 (1858).  
*Boodon guttatus*, *Bouleng. Ann. Mus. Genova*, (2) xii. 1891, p. 14.

Snout rather prominent, the rostral well visible from above; internasals much shorter than the prefrontals; frontal once and a half as long as broad; loreal trapezoid, elongate; one præ- and two postoculars; temporals 1+2; nine upper labials, two entering the eye. Scales in 23 rows. Ventrals 196; anal entire; subcaudals

\* Smith's and Duméril and Bibron's descriptions appear to me to be drawn up from the same specimen.



72. Yellowish brown above, with several rows of reddish-brown spots with umber-brown borders, the two rows of spots along the middle of the back almost circular and largest; a dark brown blotch on each side of the back of the head, and a pair of dark longitudinal streaks on the nape; underparts pale yellow.

Total length 402 millim.; tail 87.

Interior of South Africa.

### 6. *Boodon lineatus*.

*Lycodon geometricus* (*non Schleg.*), *Smith, Ill. Zool. S. Afr., Rept.* pl. xxii. (1843).

*Boëdon lineatum*, *Dum. & Bibr.* vii. p. 363 (1854); *Günth. Cat.* p. 200 (1858); *Bouleng. Zoologist*, 1887, p. 178; *Boetty. Ber. Offenb. Ver. Nat.* 24-25, 1885, p. 184, and *Ber. Senck. Ges.* 1887-88, p. 69, and 1889, p. 294; *Bouleng. Ann. Mus. Genova*, (2) xii. 1891, p. 13; *Bedriaga, Amph. et Rept. I. de Guinée (Istituto, xxxix.)*, p. 32 (1892).

— *capense*, *Dum. & Bibr.* vii. p. 364; *A. Dum. Arch. Mus.* x. 1859, p. 194, pl. xvii. fig. 3.

— *quadrivittatum*, *Hallow. Proc. Ac. Philad.* 1857, p. 54.

— *quadrilineatum*, *A. Dum. l. c.* p. 193, fig. 4; *Jan, Icon. Gén.* 36, pl. ii. figs. 2 & 3 (1870); *Peters, Reise n. Mossamb.* iii. p. 133 (1882).

*Alopocion variegatum*, *Bocage, Journ. Sc. Lisb.* i. 1867, p. 230; *Günth. Zool. Rec.* 1867, p. 141.

*Boodon geometricum*, *Bocage, Journ. Sc. Lisb.* xi. 1887, p. 199.

— *bipræocularis*, *Günth. Ann. & Mag. N. H.* (6) i. 1888, p. 330, pl. xviii. fig. B.

Eye rather small. Rostral broader than deep, just visible from above; internasals shorter than the præfrontals; frontal once and a half to twice as long as broad, as long as or a little longer than its distance from the end of the snout, as long as or shorter than the parietals; latter shields longer than the distance between the frontal and the end of the snout; loreal longer than deep; one or two præoculars, extending to the upper surface of the head and frequently in contact with the frontal; two postoculars; temporals 1+2; eight upper labials, fourth and fifth (rarely also third) entering the eye; three or four lower labials in contact with the anterior chin-shields, which are as long as the posterior, or a little longer. Scales in 25 to 31 rows. Ventrals 192-237; anal entire; subcaudals 47-70. Brown above, uniform or variegated with yellowish, with or without a yellow lateral streak; side of head light, the brown of the upper surface ending in a point on the snout, with a dark brown lateral streak passing through the eye, and brown spots on the labials, or head dark brown with two more or less distinct light lines on each side; lower parts yellowish.

Total length 870 millim.; tail 110.

Tropical and South Africa.

## A. Scales in 25 rows.

a. ♂ (V. 195; C. 60).	Tanganyika.	Sir J. Kirk [C.]*	} (Types of <i>B. bipræ-</i> <i>ocularis</i> ).
b. Yg. (V. 200; C. 64).	Rabai Hills, Mombas.	Rev. W. E. Taylor [P.].	
c. Yg. (V. 196; C. 63).	Pungo Andongo.	Dr. Welwitsch [P.].	

## B. Scales in 27 rows.

d. ♂ (V. 211; C. 56).	Lado.	Dr. Emin Pasha [P.].
e-k. Hgr. ♂ (V. 210; C. 64) & yg. (V. 193, 211, 194, 203, 193; C. 67, 60, 61, 53, 70).	Zanzibar.	Sir J. Kirk [C.].
l. Yg. (V. 203; C. 52).	Zanzibar?	Sir J. Kirk [C.].
m. Yg. (V. 208; C. 54).	Kilimanjaro.	F. J. Jackson, Esq. [P.].
n. ♂ (V. 192; C. 68, partly single).	Tanganyika.	Sir J. Kirk [C.].
o. ♂ (V. 192; C. ?).	Tanganyika.	(Type of <i>B. bipræocularis</i> .) Sir J. Kirk [C.].
p. ♀ (V. 215; C. ?).	Nyassaland.	H. H. Johnston, Esq. [P.].
q. ♂ (V. 197; C. ?).	Blantyre Mission Station.	J. Grant, Esq. [P.].
r. ♂ (V. 199; C. 58).	Zambesi.	Sir J. Kirk [C.].
s. Hgr. (V. 206; C. 55).	Delagoa Bay.	South African Museum [P.].
t. ♂ (V. 212; C. 66).	Port Natal.	Mr. T. Ayres [C.].
u. Hgr. (V. 199; C. 65).	Wathen, R. Congo.	Mrs. Bentley [C.]. Miss Macomish [P.].

## C. Scales in 29 rows.

v-r. Hgr. ♀ (V. 218; C. ?) & yg. (V. 204, 208; C. 51, 51).	Zanzibar.	Sir J. Kirk [C.].
y. Hgr. ♀ (V. 204; C. 54).	Mombasa.	D. J. Wilson, Esq. [P.].
z-a. ♂ (V. 205; C. 62) & ♀ (V. 227; C. 53).	Mpwapwa, E. Africa.	
β. ♀ (V. 219; C. 47).	Nyassaland.	H. H. Johnston, Esq. [P.].
γ. Yg. (V. 201; C. 63).	Zambesi Exped.	Sir J. Kirk [C.].
δ. Yg. (V. 205; C. 60).	Sierra Leone.	H. F. Blissett, Esq. [P.].
ε. ♀ (V. 231; C. 58).	Benguela.	F. F. Monteiro, Esq. [P.].
ζ. Yg. (V. 233; C. 58).	Benguela.	Prof. B. du Bocage [P.].
(One of the types of <i>Alopecion variegatum</i> .)		
η. Hgr. ♀ (V. 227; C. 56).	Pungo Andongo.	Dr. Welwitsch [P.].
θ. Hgr. (V. 205; C. 57).	Delagoa Bay.	S. African Museum [P.].

\* Although not alluded to in Dr. Günther's description of *B. bipræocularis*, this is the actual specimen from which the figure on pl. xviii. fig. B is taken.

ι-κ. ♀ (V. 230, 225; C. 49, 48).	Orange River.	Dr. Kannemeyer [P.].
λ. Yg. (V. 219; C. 52).	Near Grahamstown.	Rev. G. H. R. Fisk [P.].
μ. ♀ (V. 217; C. 50).	Port Natal.	Mr. T. Ayres [C.].
ν. ♂ (V. 209; C. 66).	Natal.	E. Howlett, Esq. [P.].
ξ. ♀ (V. 225; C. ?).	Port Elizabeth.	Mr. J. L. Drege [P.].

## D. Scales in 31 rows.

ο. ♀ (V. 232; C. 55).	Taveta, E. Africa.	Keith Anstruther, Esq. [P.].
π. Hgr. ♀ (V. 216; C. 62).	Coast of Guinea.	
ρ. ♀ (V. 230; C. 52).	Ashantee.	
σ. Hgr. ♀ (V. 218; C. 47).	Sierra Leone.	
τ. Hgr. ♂ (V. 202; C. 62).	Congo.	
υ. ♀ (V. 220; C. 52).	Pungo Andongo.	Dr. Welwitsch [P.].
φ. ♀ (V. 221; C. 53).	Cape of Good Hope.	Chatham Mus.
χ. ♀ (V. 225; C. 49).	King William's Town.	J. P. M. Weale, Esq. [P.].

7. *Boodon fuliginosus*.

*Lycodon fuliginosus*, *Boie, Isis*, 1827, p. 551.

— unicolor (*non Boie*), *Schleg. Phys. Serp.* ii. p. 112 (1837).

*Bœædon unicolor*, *Dum. & Bibr.* vii. p. 359 (1854); *Günth. Cat.* p. 199 (1858); *A. Dum. Arch. Mus.* x. 1859, p. 194, pl. xvii. fig. 1; *Jan, Icon. Gén.* 36, pl. ii. fig. 1 (1870); *Boettg. Abh. Senck. Ges.* xii. 1881, p. 398.

*Boodon fuliginosus*, *Bouleng. Ann. Mus. Genova*, (2) xii. 1891, p. 15.

Eye rather small. Rostral broader than deep, just visible from above; internasals shorter than the præfrontals; frontal once and a half to once and two thirds as long as broad, as long as its distance from the end of the snout, as long as the parietals; loreal at least twice as long as deep; one or two præoculars, in contact with the frontal; two postoculars; temporals 1+2, rarely 2+2; eight or nine upper labials, two or three of which enter the eye; three or four lower labials in contact with the anterior chin-shields, which are as long as or a little longer than the posterior. Scales in 27 to 31 rows. Ventrals 205-237; anal entire; subcaudals 47-67. Uniform blackish brown above, whitish inferiorly.

Total length 850 millim.; tail 100.

Soudan.

a. Yg. (Sc. 31; V. 214; C. 64).	Cape Yubi.	Fischer Collection.
b. ♂ (Sc. 31; V. 221; C. 50).	Senmio.	Hr. F. Bohndorff [C.].
c. ♂ (Sc. 27; V. 205; C. 62).	W. Africa.	
d. Hgr. (Se. 29; V. 224; C. 47).	Africa.	Prof. Grant [P.].
e. ♀ (Sc. 31; V. 237; C. 49).	Africa.	

8. *Boodon mentalis*.

*Boodon mentalis*, *Günth. Ann. & Mag. N. II.* (6) i. 1888, p. 331, pl. xix. fig. A.

Eye moderate. Rostral fully twice as broad as deep, not visible from above, forming a broad suture with the internasals, which are a little shorter than the præfrontals; frontal once and two thirds as long as broad, a little longer than its distance from the end of the snout, as long as the parietals; loreal longer than deep; one præocular, in contact with the frontal; two postoculars; temporals 1+2; eight upper labials, third, fourth, and fifth entering the eye; three lower labials in contact with the anterior chin-shields; posterior chin-shields very narrow and entirely separated from each other by the anterior. Scales in 27 rows. Ventrals 214; anal entire; subcaudals 54. Pale brownish above; two yellow lines on each side of the head; lower parts white.

Total length 350 millim.; tail 50.

Damaraland.

a. Hgr. (V. 214; C. 54).

Damaraland.

(Type.)

9. *Boodon olivaceus*.

*Holuropholis olivaceus*, *A. Dum. Rev. et Mag. Zool.* 1856, p. 466, and *Arch. Mus.* x. 1859, p. 196, pl. xvi. fig. 1; *Günth. Cat.* p. 200 (1858).

*Boodon poensis*, *Günth. Ann. & Mag. N. II.* (6) i. 1888, p. 330.

— *olivaceus*, *Bouleng. Ann. Mus. Genova*, (2) xii. 1891, p. 15.

Eye rather small. Rostral broader than deep, just visible from above; internasals much shorter than the præfrontals; frontal once and a half as long as broad, as long as its distance from the end of the snout, as long as or a little shorter than the parietals; loreal longer than deep; one or two præoculars, usually in contact with the frontal; temporals 1+2; eight upper labials, fourth and fifth or third, fourth, and fifth entering the eye; three or four lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales in 25 or 27 rows. Ventrals 191-214; anal entire; subcaudals 40-55, single. Uniform blackish brown, belly usually lighter brown, or with a yellowish median stripe.

Total length 850 millim.; tail 110.

West Africa.

a, b. ♂ (Sc. 25; V. 194;

C. 53) & hgr. (Sc. 27;  
V. 210; C. 40).

Niger Expedition.

c. ♀ (Sc. 27; V. 208;

C. 43).

Old Calabar.

D. G. Rutherford,  
Esq. [C.].

d-f. ♂ (Sc. 25; V. 191;

C. 53), ♀ (Sc. 27;  
V. 206; C. 44), & yg.

(Sc. 25; V. 204; C. 42).

Cameroons.

Fischer Collection.



g-h. ♂ (Sc. 27; V. 192; C. 45) & ♀ (Sc. 27; V. 205; C. 42).	Cameroons.	Rev. J. Pinnock [C.].
i. Yg. (Sc. 25; V. 214; C. 44).	Fernando Po.	Zool. Soc. (Type of <i>B. poensis</i> .)
k. ♀ (Sc. 27; V. 205; C. 43).	W. Africa.	
l. ♂, skel.	W. Africa.	Sir A. Smith [P.].

## 45. LYCOPHIDIUM.

*Lycodon*, part., *Schleg. Phys. Serp.* ii. p. 104 (1837).

*Lycophidion*, *Dum. & Bibr. Mém. Ac. Sc.* xxiii. 1853, p. 462, and  
*Érp. Gén.* vii. p. 412 (1854); *Günth. Cat. Col. Sn.* p. 197 (1858);  
*Jan, Elenco sist. Ofid.* p. 96 (1863); *Peters, Reise n. Mossamb.* iii.  
p. 134 (1882).

*Lissophis*, *Hallow. Proc. Ac. Philad.* 1857, p. 59.

*Alopecion*, part., *Günth. Cat.* p. 195.

*Metoporphina*, *Günth. l. c.* p. 197.

Maxillary and dentary bones angularly bent inwards anteriorly, the 6 to 10 anterior maxillary teeth increasing in size, followed after a short interval by 15 to 17 very small teeth; mandible anteriorly with five or six small teeth increasing in size and one or two large fang-like teeth, followed by very small teeth. Head scarcely distinct from neck, much depressed; eye small, with vertically elliptic pupil; nostril in a single nasal followed by a small post-nasal; præocular much developed on the upper surface of the head, taking the place of the supraocular anteriorly. Body cylindrical; scales smooth, with apical pits, in 15 or 17 rows; ventrals rounded. Tail short or moderate; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Tropical and South Africa.

*Synopsis of the Species.*

I. Subcaudals less than 60; loreal separated from the eye by the præocular.

A. Scales in 15 rows; ventrals 153-155; subcaudals 23-32.

1. *meleagris*, p. 337.

B. Scales in 17 rows.

1. Eight upper labials.

a. Rostral nearly twice as broad as deep.

a. Two labials entering the eye; diameter of the eye not greater than its distance from the mouth; ventrals 176-188. . . . . 3. *laterale*, p. 338.

β. Three labials entering the eye.

\* Parietal shields considerably longer than the distance between the frontal and the end of the snout.

- Diameter of the eye hardly equal to its distance from the mouth; ventrals 140-150; subcaudals 18-23 ..... 2. *acutirostre*, p. 338.
- Diameter of the eye considerably greater than its distance from the mouth; ventrals 146; subcaudals 30 ..... 4. *semiannulus*, p. 339.
- Diameter of the eye considerably greater than its distance from the mouth; ventrals 164-192; subcaudals 30-45 .. 5. *capense*, p. 339.
- Diameter of the eye not greater than its distance from the mouth; ventrals 164-189; subcaudals 28-33 ..... 6. *jacksoni*, p. 340.

\*\* Parietal shields not or but slightly longer than the distance between the frontal and the end of the snout; subcaudals 37-52.

- Ventrals 164-189 ..... 7. *irroratum*, p. 340.
- Ventrals 190-210 ..... 8. *semicinctum*, p. 341.
- b. Rostral but little broader than deep; ventrals 206; subcaudals 33 ..... 9. *abyssinicum*, p. 342.
2. Seven upper labials, sixth largest; ventrals 180-198; subcaudals 34-56 ..... 10. *fasciatum*, p. 342.
- II. Subcaudals 72; ventrals 225; loreal entering the eye.
11. *clapoides*, p. 343.

1. *Lycophidium meleagris*. (PLATE XXI. fig. 2.)

*Lycophidion horstockii*, part., *Günth. Cat.* p. 197 (1858), and *Ann. & Mag. N. H.* (4) i. 1868, p. 427.

— *horstockii*, *Jan, Icon. Gén.* 36, pl. iii. fig. 3 (1870).

Diameter of the eye equal to its distance from the mouth. Rostral nearly twice as broad as deep, just visible from above; internasals about as large as the nasals; prefrontals a little broader than long; frontal as long as broad, a little shorter than its distance from the end of the snout, much shorter than the parietals; loreal longer than deep; præocular as large as or larger than the supraocular, broadly in contact with the frontal; two postoculars, both in contact with the parietal; temporals 1+2; eight upper labials, third, fourth, and fifth entering the eye, seventh largest; chin-shields very small, the anterior in contact with four or five lower labials. Scales in 15 rows. Ventrals 153-155; anal entire; subcaudals 23-32. Black above and beneath; a white dot on the end of each scale, the scales on the sides white in their posterior moiety; ventrals edged with white.

Total length 260 millim.; tail 25.

Angola.

a. ♀ (V. 153; C. 23).

Ambrizette.

b. Yg. (V. 155; C. 32).

Ambriz.

Mr. Rich [C.].

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2. *Lycophidium acutirostre*.

*Lycophidium acutirostre*, *Günth. Ann. & Mag. N. II.* (4) i. 1868, p. 427, pl. xix. fig. D.

Diameter of the eye hardly equal to its distance from the mouth. Rostral twice as broad as deep, just visible from above; internasals a little larger than the nasals; præfrontals a little broader than long; frontal a little longer than broad, as long as its distance from the end of the snout, much shorter than the parietals; loreal longer than deep; præocular larger than the supraocular, broadly in contact with the frontal; two postoculars, both in contact with the parietal; temporals 1+2 or 2+3; eight upper labials, third, fourth, and fifth entering the eye, seventh largest; chin-shields very small, the anterior in contact with four or five lower labials. Scales in 17 rows. Ventrals 140-150; anal entire; subcaudals 18-28. Blackish brown, uniform or ventrals and lateral scales edged with whitish; sides of the head and end of snout whitish with brown spots.

Total length 295 millim.; tail 30.

Zanzibar.

- a-e.* ♂ (V. 146; C. 21) & ♀      Zanzibar.      Sir J. Kirk [C.]. (Types.)  
 (V. 140, 143, 146, 150;  
 C. 22, 24, 23, 18).  
*f.* Hgr. (V. 146; C. 28).      Zanzibar.      Sir J. Kirk [C.].

3. *Lycophidium laterale*.

*Lycophidium laterale*, *Hallow. Proc. Ac. Philad.* 1857, p. 58.

*Lycophidium capense*, var. *lateralis*, *Boettg. Ber. Senck. Ges.* 1888, p. 68.

Diameter of the eye equal to its distance from the mouth. Rostral twice as broad as deep, visible from above; internasals hardly as large as the nasals; præfrontals a little longer than broad; frontal as long as broad or a little longer, shorter than its distance from the end of the snout and than the parietals; loreal longer than deep; præocular rather larger than, the supraocular, broadly in contact with the frontal; two postoculars, both in contact with the parietal; temporals 1+2; eight upper labials, fourth and fifth entering the eye, seventh largest; chin-shields very small, the anterior in contact with four or five lower labials. Scales in 17 rows. Ventrals 176-188; anal entire; subcaudals 32-44. Brown or blackish above, uniform or with more or less distinct large pale brown or yellowish spots on the back; two yellow streaks on each side of the head, confluent with each other and with their fellows on the snout.

Total length 490 millim.; tail 60.

Coast of Guinea.

- a.* ♀ (V. 186; C. 32).      Accra, Gold Coast.      A. Higlett, Esq. [P.].  
*b-c.* ♂ (V. 178; C. 43)      Cameroons.  
 & ♀ (V. 181; C. 35).

4. *Lycophidium semiannulus*.

*Lycophidion semiannulus*, *Peters, Mon. Berl. Ac.* 1854, p. 622; *Günth. Cat.* p. 197 (1858); *Peters, Reise n. Mossamb.* iii. p. 135, pl. xvi. fig. 2 (1882).

Appears to agree very closely with *L. capense*, but the ventrals are much fewer, viz. 146. Subcaudals 30. Greyish blue or purplish above, with irregular black cross bars; snout and sides of head yellowish, speckled with black; blackish brown beneath, the shields edged with yellowish.

Total length 260 millim.; tail 38.

Tette, Mozambique.

5. *Lycophidium capense*.

*Lycodon capensis*, *Smith, S. Afr. Quart. Journ.* (1) no. 5, 1831, p. 18, and *Ill. Zool. S. Afr., Rept.* pl. v. (1838).

— *horstokii*, part., *Schley. Phys. Serp.* ii. p. 111, pl. iv. figs. 10 & 11 (1837).

*Lycophidium horstokii*, *Dum. & Bibr.* vii. p. 412 (1854).

*Lycophidion horstockii*, part., *Günth. Cat.* p. 197 (1858), and *Ann. & Mag. N. H.* (4) i. 1868, p. 427.

— *capense*, *A. Dum. Arch. du Mus.* x. 1859, p. 197; *Peters, Reise n. Mossamb.* iii. p. 134 (1882).

*Lycophidium capense*, mut. *multimaculata*, *Boettg. Ber. Senck. Ges.* 1838, p. 67.

Diameter of the eye greater than its distance from the mouth. Rostral twice as broad as deep, just visible from above; internasals about as large as the nasals; præfrontals as long as broad or a little longer; frontal as long as broad or a little longer, a little shorter than its distance from the end of the snout, much shorter than the parietals; loreal longer than deep; præocular as large as or a little larger than the supraocular, broadly in contact with the frontal; two postoculars, both in contact with the parietal; temporals 1+2; eight upper labials, third, fourth, and fifth entering the eye, seventh largest; chin-shields very small, the anterior in contact with four or five lower labials. Scales in 17 rows. Ventrals 164-192; anal entire; subcaudals 30-45. Brown, purplish, or olive above; sides of head speckled or vermiculate with whitish.

Total length 450 millim.; tail 45.

Africa south of the Equator.

A. Brown or dark purple above, the lateral scales tipped with whitish; lower parts whitish. (*L. capense*, Smith.)

a. ♀ (V. 188; C. 39).	Cape of Good Hope.	J. P. M. Weale, Esq.
b. ♂ (V. 180; C. 38).	Port Elizabeth.	[P.]
c. ♀ (V. 189; C. 32).	Port Elizabeth.	J. M. Leslie, Esq
		[P.]
d. ♀ (V. 190; C. 30).	Port Natal.	Mr. T. Ayres [P.].
e. Yg. (V. 179; C. 45).	Zanzibar.	Sir J. Kirk [C.].



B. Dark purplish brown above and below, lateral scales and ventrals with a whitish edge; throat white.

f. ♂ (V. 176; C. 37). Duque de Bragance, Prof. Barboza du Bocage  
Angola. [P.]

g. ♂ (V. 182; C. 45). Nyassaland. H. H. Johnston, Esq. [P.]

C. Dark grey above, the scales edged with blackish; two series of black spots along the back, the anterior confluent into cross bars; throat white; ventrals and subcaudals blackish brown edged with whitish. (Var. *multimaculata*, Boettg.)

h. ♂ (V. 175; C. 34). Congo.

### 6. *Lycophidium jacksoni*. (PLATE XXI. fig. 3.)

Diameter of the eye not greater than its distance from the mouth. Rostral twice as broad as deep, visible from above; internasals about as large as the nasals; præfrontals a little longer than broad; frontal a little longer than broad, as long as its distance from the rostral, much shorter than the parietals; loreal longer than deep; præocular as large as the supraocular, broadly in contact with the frontal; two postoculars, both in contact with the parietal; temporals 1+2; eight upper labials, third, fourth, and fifth entering the eye; chin-shields very small, the anterior in contact with four lower labials. Scales in 17 rows. Ventrals 164-189; anal entire; subcaudals 28-33. Olive-grey above and beneath, the scales with or without whitish dots.

Total length 550 millim.; tail 55.

East Africa.

a. ♀ (V. 189; C. 33). Kilimanjaro. F. J. Jackson, Esq. [P.]

b. ♀ (V. 164; C. 28). Lamu, E. coast of Africa, F. J. Jackson, Esq. [P.]  
N. of Zanzibar.

### 7. *Lycophidium irroratum*.

*Coluber irroratus*, Leach, in Bowdich, *Miss. Ashantee*, p. 494 (1819).

*Hypsirhina maura*, Gray, *Zool. Miscell.* p. 67 (1842).

*Metoporphina irrorata*, Günth. *Cat.* p. 198 (1858).

*Lycophidium irroratum*, part., Günth. *Ann. & Mag. N. II.* (4) i. 1863, p. 426.

— *nigromaculatus*, Jan, *Icon. Gén.* 36, pl. iii. fig. 5 (1870).

— *guttatus*, Jan, *l. c.* fig. 6.

Diameter of the eye greater than its distance from the mouth. Rostral twice as broad as deep, visible from above; internasals hardly as large as the nasals; præfrontals a little longer than broad; frontal as long as broad or a little longer, shorter than its distance from the end of the snout, which nearly equals the length of the parietals; loreal longer than deep; præocular nearly as large as or larger than the supraocular, broadly in contact with the frontal; two postoculars, both in contact with the parietal; temporals 1+2; eight upper labials, third, fourth, and fifth entering the eye, seventh

largest; chin-shields very small, the anterior in contact with four or five lower labials. Scales in 17 rows. Ventrals 164-189; anal entire; subcaudals 37-52. Brown above, with or without a dark vertebral line; a series of transverse dark brown or black spots usually present along each side of the back, these spots wide apart and usually alternating with those of the other side; head speckled or vermiculated with dark brown; a yellowish, dark-edged streak from the eye to the angle of the mouth; ventrals and subcaudals dark brown or olive-brown in the middle, yellowish speckled with brown on the sides.

Total length 420 millim.; tail 57.

Guinea.

- |  |                                   |                                     |
|--|-----------------------------------|-------------------------------------|
| a. Hgr. (V. 170; C. 39).                                   | Fantee.                           | T. E. Bowdich, Esq. [P].<br>(Type.) |
| b. ♀ (V. 189; C. 42).                                      | Ashantee.                         | Mr. McCarthy [C.].                  |
| c. ♀ (V. 164; C. 37).                                      | Gold Coast.                       | (Type of <i>H. maura</i> .)         |
| d. Yg. (V. 164; C. ?).                                     | Asaba, 180 miles<br>up the Niger. | Dr. J. W. Crosse [P.].              |
| e-g. ♂ (V. 183; C. 52)<br>& ♀ (V. 180, 189; C.<br>42, 43). | W. Africa.                        | J. C. Salmon, Esq. [P.].            |

### S. *Lycophidium semicinctum*.

*Lycodon horstockii*, part., *Schleg. Phys. Serp.* ii. p. 111 (1837).

*Lycophidion semicinctum*, *Dum. & Bibr.* vii. p. 414 (1854); *Jan Icon. Gén.* 36, pl. iii. fig. 4 (1870).

— horstockii, part., *Günth. Cat.* p. 197 (1858), and *Ann. & Mag N. H.* (3) xviii. 1866, p. 29, pl. vii. fig. A, and (4) i. 1868 p. 427.

— horstockii, var. albomaculata, *Steind. Sitzb. Ak. Wien*, lxiii. 1870, p. 334.

Diameter of the eye but slightly greater than its distance from the mouth. Rostral twice as broad as deep, just visible from above; internasals hardly as large as the nasals; præfrontals as long as broad or a little longer; frontal as long as broad, as long as the præfrontals, shorter than the parietals; latter shields short, not longer than the distance between the frontal and the end of the snout; loreal longer than deep; præocular as large as or a little larger than the supraocular, broadly in contact with the frontal; two postoculars, both in contact with the parietal; temporals 1+2; eight upper labials, third, fourth, and fifth entering the eye; chin-shields very small, the anterior in contact with four or five lower labials. Scales in 17 rows. Ventrals 190-210; anal entire; subcaudals 37-52. Black or dark brown above and beneath, uniform or with yellowish cross bars or a dorsal series of large sub-quadrangular yellowish spots.

Total length 545 millim.; tail 65.

Senegambia and Guinea.

A. With yellowish cross bands. (*L. semicinctum*, D. & B.)

- a. ♀ (V. 208; C. 38). — ?

B. With yellowish dorsal spots. (Var. *albomaculata*, Steind.)

b-c. ♀ (V. 200; C. 38)                      Gambia.                      Sir A. Smith [P.]  
& yg. (V. 202; C. 38).

C. Uniform black.

d. ♀ (V. 208; C. 42).                      W. Africa.                      Mr. Fraser [C.].

9. *Lycophidium abyssinicum*. (PLATE XXII. fig. 1.)

Diameter of the eye greater than its distance from the mouth. Rostral but little broader than deep, just visible from above; internasals a little larger than the nasals; præfrontals as broad as long; frontal slightly longer than broad, as long as its distance from the rostral, shorter than the parietals; loreal longer than deep; præocular a little larger than the supraocular, broadly in contact with the frontal; two postoculars, both in contact with the parietal; temporals 1+2; eight upper labials, third, fourth, and fifth entering the eye, seventh largest; chin-shields very small, anterior in contact with five labials. Scales in 17 rows. Ventrals 206; anal entire; subcaudals 33. Purplish brown above and beneath, the shields and scales edged with white.

Total length 200 millim.; tail 20.

Abyssinia.

a. Hgr. (V. 206; C. 33).                      S. Abyssinia.

10. *Lycophidium fasciatum*. (PLATE XXII. fig. 2.)

*Alopecion fasciatum*, Günth. *Cat.* p. 196 (1858).

*Lycophidium irroratum*, part., Günth. *Ann. & Mag. N. H.* (4) i. 1868, p. 426.

Diameter of the eye much greater than its distance from the mouth. Rostral twice as broad as deep, visible from above; internasals at least as large as the nasals, one half to two fifths the length of the præfrontals, which are broader than long; frontal as long as broad or broader than long, as long as or a little shorter than its distance from the end of the snout, a little shorter than the parietals; loreal longer than deep; præocular as large as or a little smaller than the supraocular, forming a short suture with the frontal; seven upper labials, third, fourth, and fifth entering the eye, sixth largest; anterior chin-shields longer and wider than the posterior, and in contact with four or five lower labials. Scales in 17 rows. Ventrals 180-198; anal entire; subcaudals 34-56. Brown above, with black cross bars or alternating transverse spots; lower parts dark brown, the shields edged with whitish.

Total length 350 millim.; tail 60.

Guinea.

a. ♀ (V. 185; C. 34).                      W. Africa.                      Mr. Rich [C.]. (Type.)  
b. Hgr. ♂ (V. 180; C. 42).                      Sierra Leone.

- c-e.* ♂ (V. 189, 188; C. Oil River. H. H. Johnston, Esq. [P.].  
42, 43) & ♀ (V. 180;  
C. 34).  
*f.* ♂ (V. 198; C. 56). Gaboon. H. Ansell, Esq. [P.].

### 11. *Lycophidium elapoides*. (PLATE XXII. fig. 3.)

*Lycophidium elapoides*, *Günth. Proc. Zool. Soc.* 1874, p. 444.

Diameter of the eye greater than its distance from the mouth. Rostral twice as broad as deep, just visible from above; internasals hardly as large as the nasals; præfrontals as long as broad; frontal once and a half as long as broad, as long as its distance from the end of the snout, a little shorter than the parietals; loreal elongate, entering the eye; præocular as large as the supraocular, broadly in contact with the frontal; two postoculars, both in contact with the parietal; temporals 2+3; eight upper labials, third, fourth, and fifth entering the eye, seventh largest; chin-shields very small, the anterior in contact with four lower labials. Scales in 17 rows. Ventrals 225; anal entire; subcaudals 72. Yellowish above, with black annuli, which are a little broader than the interspaces between them, and interrupted on the belly; head dark brown, sides dotted with yellowish; belly yellowish, dotted with black.

Total length 410 millim.; tail 90.

Cameroons.

- a.* ♂ (V. 225; C. 72). Cameroons. (Type.)

## 46. HORMONOTUS.

*Lamprophis*, part., *Dum. & Bibr. Erp. Gén.* vii. p. 427 (1854).

*Hormonotus*, *Hallow. Proc. Ac. Philad.* 1857, p. 56; *Cope, Proc. Ac. Philad.* 1860, p. 262.

*Heterolepis*, part., *Jan, Elenco sist. Ofid.* p. 98 (1863); *Mocquard, Bull. Soc. Philom.* (7) xi. 1887, p. 8.

Maxillary and dentary bones angularly bent inwards anteriorly; the five anterior maxillary teeth increasing in size, the fourth and fifth very large, fang-like, followed after an interval by 15 small equal teeth; anterior mandibular teeth strongly enlarged. Head very distinct from neck, depressed; eye large, with vertically elliptic pupil. Body compressed; scales smooth, without pits, in 15 rows, those of the middle row enlarged; ventrals with a lateral keel. Tail moderate; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

West Africa.

### 1. *Hormonotus modestus*.

*Lamprophis modestus*, *Dum. & Bibr.* vii. p. 429 (1854); *A. Dum. Arch. Mus.* x. 1859, p. 197.

*Hormonotus audax*, *Hallow. Proc. Ac. Philad.* 1857, p. 56.



- Hormonotus modestus*, *Günth. Ann. & Mag. N. H.* (3) ix. 1862, p. 53 ;  
*Bouleng. Ann. & Mag. N. H.* (6) viii. 1891, p. 345.  
*Heterolepis glaber*, *Jan, Elenco*, p. 98 (1863), and *Icon. Gén.* 36,  
 pl. vi. fig. 4 (1870) ; *F. Müll. Verh. nat. Ges. Basel*, vii. 1885,  
 p. 686 ; *Mocquard, Bull. Soc. Philom.* (7) xi. 1887, p. 13.  
*Boodon (Lamprophis) modestus*, *Peters, Mon. Berl. Ac.* 1875,  
 p. 200.  
 — (Alopecion) *vossii*, *Fischer, Jahrb. Humb. Wiss. Anst.* v. 1888,  
 p. 3, pl. i. fig. 1.

Rostral twice as broad as deep, scarcely visible from above ; internasals as long as broad, shorter than the præfrontals ; frontal twice as long as broad, as long as or a little longer than its distance from the end of the snout, as long as the parietals ; loreal twice as long as deep ; one præ- and two or three postoculars ; temporals 2+3 ; eight upper labials, third, fourth, and fifth, or fourth and fifth, entering the eye ; four or five lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales in 15 rows, those of the middle row hexagonal and nearly as broad as long. Ventrals 221-244 ; anal entire ; subcaudals 81-99. Uniform pale brown or fulvous above, white beneath ; some or all of the upper labials with a dark brown spot.

Total length 730 millim. ; tail 150.

West Africa, from the Gold Coast to the Gaboon.

A. Two labials entering the eye ; two postoculars.

- a. ♀ (V. 232 ; C. 94). W. Africa. J. C. Salmon, Esq. [P.].

B. Three labials entering the eye ; three postoculars.

- b. ♂ (V. 236 ; C. 97). Fernando Po. Dr. A. Günther [P.].  
 c. ♂ (V. 244 ; C. 97). Cameroons. Dr. J. G. Fischer. (Type  
 of *Boodon vossii*.)  
 d. ♀ (V. 231 ; C. 85). W. Africa.

#### 47. SIMOCEPHALUS.

*Heterolepis (non Nees)*, *Smith, Ill. Zool. S. Afr., Rept.* (1847) ; *Dum. & Bibr. Erp. Gén.* vii. p. 419 (1854) ; *Günth. Ann. & Mag. N. H.* (3) xii. 1863, p. 359.

*Simocephalus*, *Günth. Cat. Col. Sn.* p. 194 (1858).

*Simocephalus*, part., *Günth. Ann. & Mag. N. H.* (3) xii. 1863, p. 359.

*Heterolepis*, part., *Jan, Elenco sist. Ofid.* p. 94 (1863) ; *Mocquard, Bull. Soc. Philom.* (7) xi. 1887, p. 8.

Maxillary and dentary bones angularly bent inwards anteriorly ; the 8 or 9 anterior maxillary teeth increasing in size and followed after an interval by 15 to 28 very small teeth ; anterior mandibular teeth increasing in size, the eighth or ninth largest. Head very distinct from neck, much depressed ; eye moderate or small, with vertically elliptic pupil ; nostril very large. Body cylindrical ; scales keeled, without pits, in 15 or 17 rows, those of the middle

rows enlarged and bicarinate; ventrals with a strong lateral keel. Tail moderate; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Tropical and South Africa.

*Synopsis of the Species.*

- I. Frontal but slightly shorter than the parietals; ventrals 203-241; subcaudals 45-61 . . . . . 1. *capensis*, p. 345.
- II. Frontal much shorter than the parietals.
- A. Two postoculars; ventrals 240 or more.
- Three labials entering the eye; subcaudals 60-70 . . . . . 2. *guirali*, p. 346.
- Two labials entering the eye; subcaudals 75-124 . . . . . 3. *poensis*, p. 346.
- B. One postocular; ventrals 178-214; subcaudals 59-63.
- Eye much larger than the nostril . . . 4. *nyassæ*, p. 347.
- Eye scarcely larger than the nostril . . 5. *stenophthalmus*, p. 347.

1. *Simocephalus capensis*.

*Heterolepis capensis*, *Smith, Ill. Zool. S. Afr., Rept.* pl. lv. (1847); *Dum. & Bibr.* vii. p. 426 (1854); *Peters, Mon. Berl. Ac.* 1876, p. 119; *Mocquard, Bull. Soc. Philom.* (7) i. 1887, p. 22; *Bouleng. Ann. & Mag. N. H.* (6) viii. 1891, p. 344.

— *gucinzi*, *Peters, Mon. Berl. Ac.* 1874, p. 164, pl. —. fig. 2; *Mocquard, l. c.*

— *savorgnani*, *Mocquard, l. c.* p. 27, pl. x. fig. 4.

Rostral broader than deep, just visible from above; internasals broader than long, two thirds the length of the præfrontals; frontal a little longer than broad, as long as its distance from the rostral or the end of the snout, slightly shorter than the parietals; loreal square; a small præocular; two small postoculars; temporals 1+2; seven upper labials, third and fourth entering the eye; four lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales strongly keeled, with secondary keels and tubercles, in 15 rows (17 on the neck). Ventrals 203-241; anal entire; subcaudals 45-61. Dark olive-brown above, upper lip, middle of vertebral scales, and ends of lower scales yellowish; yellowish beneath.

Total length 930 millim.; tail 133.

South-east Africa and Ogowai.

- a.* ♂ (Head and anterior extremity of body and tail; C. 45). Delagoa Bay. S. African Museum [P.].

2. *Simocephalus guirali*.

*Heterolepis bicarinatus* (non D. & B.), *Sauvage, Bull. Soc. Philom.* (7) viii. 1884, p. 145.

— *guirali, Mocquard, Bull. Soc. Philom.* (7) xi. 1887, p. 23, pl. ii. fig. 3.

Rostral much broader than deep, just visible from above; internasals broader than long, two thirds the length of the præfrontals; frontal as long as broad or slightly longer, as long as the præfrontals, much shorter than the parietals; loreal as long as deep; one præ- and two postoculars; temporals 1+2; seven upper labials, third, fourth, and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are a little longer than the posterior. Scales strongly keeled and striated, the striations directed obliquely towards the keels, in 15 rows (17 on the neck). Ventrals 248-255; anal entire; subcaudals 60-70. Black above, the lateral scales tipped with yellow; lower parts yellow; a black spot at the outer end of each ventral; subcaudals brown in front.

Total length 1260 millim.; tail 160.

Coast of Guinea.

*a-b.* ♀ (V. 248; C. 60) & Oil River District. H. H. Johnston, Esq.  
yg. (V. 248; C. 70). [P.]

3. *Simocephalus poensis*.

*Heterolepis poensis, Smith, Ill. Zool. S. Afr., Rept.* (1847); *Boettg. Ber. Senck. Ges.* 1880, p. 279; *Bouleng. Ann. & Mag. N. H.* (6) viii. 1891, p. 346.

— *bicarinatus, Dum. & Bibr.* vii. p. 422 (1854); *Jan, Icon. Gén.* 36, pl. vi. fig. 5 (1870); *Mocquard, Bull. Soc. Philom.* (7) xi. 1887, p. 19, pl. i. fig. 2.

*Simocephalus poensis, Günth. Cat.* p. 194 (1858), and *Ann. & Mag. N. H.* (3) xii. 1863, p. 360; *Bocage, Journ. Sc. Lisb.* iv. 1873, p. 218.

Rostral nearly twice as broad as deep, just visible from above; internasals broader than long, one half or three fifths the length of the præfrontals; frontal a little longer than broad, as long as its distance from the rostral, much shorter than the parietals; loreal as long as deep or a little longer; one præ- and two postoculars; temporals 1+2; seven upper labials, third and fourth entering the eye; five lower labials in contact with the anterior chin-shields, which are a little longer than the posterior. Scales strongly keeled, secondary keels feebly marked or absent, in 15 rows (17 on the neck). Ventrals 240-256; anal entire; subcaudals 75-124. Blackish above and on the outer ends of the ventrals, yellow inferiorly.

Total length 1200 millim.; tail 220.

West Africa.

a. ♂ (V. 252; C. ?).	Fernando Po.	Niger Expedition. (Type.)
b, c. ♀ (V. 248, 251; C. 96, 93).	Fernando Po.	Sir A. Smith [P.].
d. ♀ (V. 256; C. 93).	Cameroons.	Liverpool Museum.
e. ♀ (V. 242; C. 85).	Cameroons.	Dr. J. G. Fischer.
f. ♀ (V. 253; C. 94).	Eloby district.	
g. ♀ (V. 253; C. 85).	Old Calabar.	W. Logan, Esq. [P.].
h. ♀ (V. 247; C. ?).	Sierra Leone.	H. C. Hart, Esq. [P.].
i. Yg. (V. 251; C. 124).	W. Africa.	J. C. Salmon, Esq. [P.].
k, l. Yg. (V. 253, 250; C. 92, 104).	W. Africa.	

#### 4. *Simocephalus nyassæ*. (PLATE XXIII. fig. 2.)

*Simocephalus nyassæ*, *Günth. Ann. & Mag. N. H.* (6) i. 1888, p. 328.

Rostral much broader than deep, just visible from above; internasals broader than long, half the length of the præfrontals; frontal a little longer than broad, as long as its distance from the rostral, much shorter than the parietals; loreal longer than deep; one præ- and one postocular; temporals 1+2; seven upper labials, third and fourth entering the eye, fifth sometimes touching the parietals; five lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales strongly keeled, with secondary keels and tubercles, in 15 rows (17 on the neck). Ventrals 171-178; anal entire; subcaudals 62-63. Blackish brown above, paler brown below, the chin and the lateral ventral keel yellowish.

Total length 460 millim.; tail 100.

Lake Nyassa; Zanzibar.

a. Hgr. (V. 178; C. 63).	L. Nyassa.	(Type.)
b. Yg. (V. 171; C. 62).	Zanzibar.	Sir J. Kirk [C.].

#### 5. *Simocephalus stenophthalmus*.

*Heterolepis stenophthalmus*, *Mocquard, Bull. Soc. Philom.* (7) xi. 1887, p. 10, pl. i. fig. 1.

Differs from *H. poensis* in the smaller eye, which is scarcely larger than the nostril, the presence of a single postocular, the less strongly keeled scales, and the number of ventrals (206-214) and subcaudals (59). Uniform dark purplish brown above; belly yellowish, with a purplish-brown spot on the outer end of each ventral; subcaudals brown with whitish posterior edge.

Total length 590 millim.; tail 110.

Coast of Guinea.



## 48. LYCODON.

- Lycodon*, part., *Boie, Isis*, 1827, p. 521; *Wagl. Syst. Amph.* p. 180 (1830); *Schleg. Phys. Serp.* ii. p. 104 (1837); *Dum. & Bibr. Erp. Gén.* vii. p. 367 (1854); *Günth. Cat. Col. Sn.* p. 201 (1858); *Jan, Elenco sist. Ofid.* p. 95 (1863); *Günth. Rept. Brit. Ind.* p. 315 (1864).  
*Ophites*, *Wagl. l. c.* p. 186; *Dum. & Bibr. t. c.* p. 397; *Günth. ll. cc.* pp. 206, 322; *Jan, l. c.*  
*Cercaspis*, *Wagl. l. c.* p. 191; *Dum. & Bibr. t. c.* p. 389; *Günth. ll. cc.* pp. 207, 323; *Jan, l. c.* p. 94.  
*Sphecodes*, *Dum. & Bibr. Mém. Ac. Sc.* xxiii. 1853, p. 461, and *Erp. Gén.* vii. p. 394.  
*Leptorhytaon*, *Günth. ll. cc.* pp. 205, 321.  
*Tetragonosoma*, *Günth. ll. cc.* pp. 253, 320.  
*Tyleria*, *Theob. Cat. Rept. As. Soc. Mus.* p. 66 (1868).  
*Lycodon*, *Bouleng. Faun. Ind., Rept.* p. 291 (1890).

Fig. 23.

Maxillary and mandible of *Lycodon aulicus*.

Maxillary bent inwards anteriorly in the adult, the three to six anterior teeth increasing in size, fang-like, and separated by a toothless interspace from the rest, seven to fifteen in number, which increase in size posteriorly; anterior mandibular teeth longest, fang-like. Head not or but slightly distinct from neck, more or less depressed; eye small or moderate, with vertically elliptic pupil; nostril large or rather large. Body more or less elongate, cylindrical or slightly compressed; scales smooth or keeled, in 17 or 19 rows, with apical pits; ventrals with or without a lateral keel. Tail moderate; subcaudals single or double.

Southern Asia.

*Synopsis of the Species.*

I. A præocular, separating the eye from the præfrontal.

A. Scales smooth.

1. Scales in 17 rows; subcaudals usually in two rows.

a. Ventrals not angulate; anal divided.

a. Nostril between two nasals.

- |                                 |                                 |
|---------------------------------|---------------------------------|
| 8 upper labials . . . . .       | 1. <i>striatus</i> , p. 349.    |
| 9 or 10 upper labials . . . . . | 2. <i>jara</i> , p. 350.        |
| β. Nasal single . . . . .       | 3. <i>tessellatus</i> , p. 351. |

## b. Ventrals laterally angulate.

## a. Loreal present.

\* Internasal extensively in contact with the loreal.

- Two loreals; anal entire . . . . . 4. *anamallensis*, p. 351.  
 One loreal; anal divided (rarely entire).. 5. *aulicus*, p. 352.

\*\* Internasal not or but slightly in contact with the loreal.

- Anal divided . . . . . 6. *laoensis*, p. 354.  
 Anal entire . . . . . 7. *travancoricus*, p. 355.

## β. No loreal, præfrontal in contact with the labials.

- Three labials entering the eye; ventrals  
 215-228 . . . . . 8. *effrensis*, p. 356.  
 Two labials entering the eye; ventrals [p. 356.  
 235-257 . . . . . 9. *atropurpureus*,

2. Scales in 19 rows; subcaudals single.  
 10. *stormi*, p. 357.

## B. Scales keeled.

## 1. Scales in 17 rows; subcaudals in two rows.

- Scales strongly keeled; subcaudals 155-  
 208 . . . . . 11. *albofuscus*, p. 357.  
 Scales feebly keeled; subcaudals 77-90.. 12. *fasciatus*, p. 358.

## 2. Scales in 19 rows.

- Scales feebly keeled; subcaudals in two  
 rows . . . . . 13. *gammiei*, p. 358.  
 Scales strongly keeled; subcaudals single. 14. *carinatus*, p. 358.

II. No præocular; præfrontal entering the eye; scales in 17 rows; subcaudals in two rows . . . . . 15. *subcinctus*, p. 359.1. *Lycodon striatus*.

- Russell, Ind. Serp.* i. pls. xvi. & xxvi. (1796).  
*Coluber striatus, Shaw, Zool.* iii. p. 527 (1802).  
 — *malignus, Daud. Rept.* vii. p. 46 (1803).  
 — *galathea, Daud. t. c.* p. 55.  
*Lycodon malignus, Boie, Isis*, 1827, p. 551.  
 — *galathea, Boie, l. c.*  
 ? *Lycodon napei, Dum. & Bibr.* vii. p. 384 (1854).  
*Lycodon aulicus, part., Günth. Cat.* p. 202 (1858).  
 — *striatus, Günth. Rept. Brit. Ind.* p. 318 (1864); *Stoliczka,*  
*Journ. As. Soc. Beng.* xxxix. 1870, p. 200; *Anders. Proc. Zool.*  
*Soc.* 1871, p. 187; *Peters, Sitzb. Ges. naturf. Freunde*, 1881, p. 90;  
*Murray, Zool. Sind.* p. 384 (1884); *Bouleng. Faun. Ind., Rept.*  
 p. 292 (1890), and *Proc. Zool. Soc.* 1891, p. 632.

Snout much depressed, slightly projecting; eye rather small.

Rostral much broader than deep, just visible from above; internasals much shorter than the præfrontals; frontal once and one third to once and a half as long as broad, as long as its distance from the end of the snout, as long as the parietals or a little shorter; loreal elongate, not entering the eye, forming a suture with the internasal; two postoculars; temporals small, 1+2, 2+2, or 2+3; eight upper labials, third, fourth, and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are usually longer than the posterior. Scales smooth, in 17 rows. Ventrals 153-178, not angulate; anal divided; subcaudals 42-66 pairs. Dark brown or black above, with white transverse spots or cross bands, which are widely separated anteriorly; sides lineolated with white, with a black spot corresponding to each white cross band; upper lip and lower parts uniform white.

Total length 430 millim.; tail 75.

India; Transcaspia.

- |  |                          |                           |
|--|--------------------------|---------------------------|
| a. ♂ (V. 177; C. 66).  | Puli Hatun, Transcaspia. | M. C. Eylandt [C.].       |
| b. ♀ (V. 178; C. 44).  | Kurrachee.               | Kurrachee Museum [E.].    |
| c-e. ♂ (V. 162, 172; C. 43, 47) & ♀ (V. 166; C. 47).   | Russelconda.             | Col. Beddome [C.].        |
| f. ♀ (V. 175; C. 51).  | Madras.                  | J. E. Boileau, Esq. [P.]. |
| g. ♂ (V. 155; C. 48).  | Wynad.                   | Col. Beddome [C.].        |
| h-i, k-l, m, n. ♂ (V. 167, 160; C. 51, 43), ♀ (V. 164; C. 45), hgr. (V. 177; C. 44), & yg. (V. 168, 160; C. 50, 45). | Anamallays.              | Col. Beddome [C.].        |
| o-q. ♂ (V. 164; C. 50), hgr. (V. 173; C. 42), & yg. (V. 160; C. 44).   | S. India.                | Col. Beddome [C.].        |
| r-s. ♂ (V. 163, 153; C. 62, 54).   | India.                   |                           |

## 2. *Lycodon jara*.

*Russell, Ind. Serp. i. pl. xiv. (1796).*

*Coluber jara, Shaw, Zool. iii. p. 525 (1802).*

— *bipunctatus, Cantor, Proc. Zool. Soc. 1839, p. 52.*

*Lycodon jara, Schleg. Phys. Serp. ii. p. 110 (1837); Peters, Mon.*

*Berl. Ac. 1867, p. 236; Stoliczka, Journ. As. Soc. Beng. xi. 1871,*

*p. 442; Bouleng. Faun. Ind., Rept. p. 292 (1890).*

*Leptorhyaon jara, Günth. Cat. p. 205 (1853), and Rept. Brit. Ind.*

*p. 321 (1864).*

*Lycophidion bipunctatum, Peters, Mon. Berl. Ac. 1863, p. 403.*

Snout much depressed; eye rather small. Rostral much broader than deep, just visible from above; internasals much shorter than the præfrontals; frontal once and one third to once and a half as long as broad, as long as or a little shorter than its distance from

the end of the snout, a little shorter than the parietals; loreal elongate, not entering the eye, forming a suture with the internasal; one præocular; two postoculars; temporals small, 1+2 or 2+3; nine or ten upper labials, third, fourth, and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales smooth, in 17 rows. Ventrals 167-183, not angulate laterally; anal divided; subcaudals 52-63 pairs. Brown above, each scale with two white dots, or short longitudinal lines; labials white; usually a white collar; lower surfaces uniform white.

Total length 350 millim.; tail 60.

N.E. and S. India and Burma.

- |                               |             |                               |
|-------------------------------|-------------|-------------------------------|
| a. ♀ (V. 180; C. ?).          | Calcutta.   | W. T. Blanford, Esq.<br>[P.]. |
| b. ♂ (V. 167; C. 63).         | Anamallays. | Col. Beddome [C.].            |
| c. Hgr. (V. 172; C. 56).      | Malabar.    | Col. Beddome [C.].            |
| d-e. ♀ (V. 183; C. ?) & hgr.  | India.      | Gen. Hardwicke [P.].          |
| (V. 175; C. 52).              |             |                               |
| f-g. ♂ (V. 169; C. 61) & hgr. | India.      |                               |
| (V. 180; C. 58).              |             |                               |

### 3. *Lycodon tessellatus*.

*Lycodon tessellatum*, *Jan, Elenco*, p. 96 (1863), and *Icon. Gén.* 36, pl. iv. fig. 2 (1870).

Snout moderately depressed; eye rather small. Rostral broader than deep, just visible from above; internasals much shorter than the præfrontals; frontal nearly as long as its distance from the end of the snout, slightly shorter than the parietals; loreal elongate, not entering the eye, forming a suture with the internasal; one præ- and two postoculars; temporals small, scale-like, 2+3; nine upper labials, third, fourth, and fifth entering the eye; four lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales smooth, in 17 rows. Anal divided. Subcaudals in two rows. Above with three series of alternating black spots; ventrals and subcaudals brown, edged with whitish.

Manilla, Philippines.

### 4. *Lycodon anamallensis*. (PLATE XXIV. fig. 1.)

*Lycodon anamallensis*, *Günth. Rept. Brit. Ind.* p. 318 (1864); *Bouleng. Faun. Ind., Rept.* p. 293 (1890).

Snout depressed, subspatulate in the adult; eye rather large in the half-grown, rather small in the adult. Rostral much broader than deep, just visible from above; internasals much shorter than the præfrontals; frontal once and a half to twice as long as broad, as long as its distance from the end of the snout, slightly shorter than the parietals; two loreals, the anterior forming a suture with the internasal; one præocular, in contact with the



frontal; two postoculars; temporals small, scale-like, 2+3; nine upper labials, third, fourth, and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales smooth, in 17 rows. Ventrals 189-202, obtusely angulate laterally; anal undivided; subcaudals 64-74 pairs. Brown above, with narrow white, black-edged cross bands; labials white, each with a brown spot; lower parts uniform white.

Total length 510 millim.; tail 95.

S. India.

- |                          |             |                              |
|--------------------------|-------------|------------------------------|
| a. Hgr. (V. 202; C. 74). | Anamallays. | Col. Beddome [C.]<br>(Type.) |
| b. ♀ (V. 189; C. 64).    | Wynad.      | Col. Beddome [C.]            |

### 5. *Lycodon aulicus*.

*Russell, Ind. Serp.* ii. pls. xxxvii. & xxxix. (1801).

*Coluber aulicus*, *Linn. Mus. Ad. Frid.* i. p. 29, pl. xii. fig. 2 (1754),  
and *S. N.* i. p. 381 (1766).

*Lycodon aulicus*, *Boie, Isis*, 1827, p. 551; *Günth. Rept. Brit. Ind.*  
p. 316 (1864), and *Zool. Rec.* 1870, p. 75; *Jan, Icon. Gén.* 36,  
pl. iv. fig. 1 (1870); *Theob. Cat. Rept. Brit. Ind.* p. 199 (1876);  
*Murray, Zool. Sind.*, p. 383 (1884); *Bouleng. Faun. Ind., Rept.*  
p. 294 (1890).

— *capucinus*, *Boie, l. c.*

— *unicolor*, *Boie, l. c.*

— *hebe*, *Schleg. Phys. Serp.* ii. p. 106, pl. iv. figs. 1-6 (1837).

— *aulicus*, part., *Cantor, Cat. Mal. Rept.* p. 68 (1847); *Dum. &*  
*Bibr.* vii. p. 369 (1854); *Günth. Cat.* p. 201 (1858).

*Tyleria hypsirhinoides*, *Theob. Cat. Rept. As. Soc. Mus.* p. 66  
(1868).

Snout much depressed, with swollen lips, spatulate in the adult; eye rather small. Rostral much broader than deep, just visible from above; internasals much shorter than the præfrontals; frontal once and one third to once and two thirds as long as broad, usually shorter than its distance from the end of the snout, shorter than the parietals; loreal elongate, not entering the eye, extensively in contact with the internasal; one præocular, usually in contact with the frontal; two (rarely three) postoculars; temporals small, 2+3 or 3+3; nine upper labials, third, fourth, and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales smooth, in 17 rows. Ventrals 178-224, obtusely angulate laterally; nasal divided (rarely entire); subcaudals 56-80 pairs. Brown above, uniform or with whitish markings; upper lip white, uniform or spotted with brown; lower parts uniform white.

Total length 510 millim.; tail 110.

India and Ceylon, Himalayas, Burma, Siam, Cochinchina, Malay Peninsula, Sumatra, Java, Philippines, Celebes, Flores, Timor. Introduced in the Mascarene Islands.

A. Labials without spots; a triangular whitish blotch on each side of the occiput, the two sometimes confluent and forming a collar; back with whitish cross bands bifurcating on the sides. (*C. aulicus*, L.)

- a-b. ♀ (V. 185; C. 64) & Near Candy. Capt. Gascoigne [P.]  
 yg. (V. 179; C. 68).  
 c. Hgr. (V. 203; C. 57). Ceylon. Gen. Hardwicke [P.]  
 d. Yg. (V. 195; C. 65). Ceylon. W. Ferguson, Esq.  
 [P.]  
 e, f. ♀ (V. 192, 197; C. 57, Ceylon.  
 58).  
 g. Hgr. (V. 204; C. 63). Plains of S. India. Col. Beddome [C.]  
 h-i. Hgr. (V. 199; C. 71) Matheran. Dr. Leith [P.]  
 & yg. (V. 193; C. 68).  
 k. Ad., skel. Ceylon.

B. Labials without spots; a whitish collar and a few (2-5) whitish cross bands on the anterior part of the body.

- l. ♀ (V. 199; C. 60). Ceylon. A. Paul, Esq. [P.]  
 m. Hgr. (V. 182; C. 60). Ceylon. Sir E. Tennant [P.]  
 n-o. Hgr. (V. 190, 190; Ceylon.  
 C. 65, 67).

C. Labials without spots; no collar; no dorsal spots or bands.

- p. ♀ (V. 200; C. 67). Ceylon. Dr. Kelaart.  
 q. ♀ (V. 201; C. 62). Ceylon. Sir E. Tennant [P.]  
 r-s. ♂ (V. 180; C. 62) & Ceylon.  
 hgr. (V. 194; C. 66).

D. Some or all of the labials with a brown spot; a whitish collar or a triangular whitish blotch on each side of the occiput; back with whitish cross bands bifurcating on the sides, or with a dorsal series of quadrangular blotches, or with white lines disposed irregularly or forming a wide-meshed network. (*L. capucinus*, Boic.)

- t, u. Yg. (V. 208, 204; C. Madras. Sir W. Elliot [P.]  
 65, 59).  
 v. Yg. (V. 202; C. 66). Anamallays. Col. Beddome [C.]  
 w. Hgr. (V. 203; C. 70). Kimey Hills. Col. Beddome [C.]  
 x-z. ♂ (V. 202; C. 66), ♀ Russelconda. Col. Beddome [C.]  
 (V. 208; C. 69), & yg.  
 (V. 199; C. 67).  
 aa. Yg. (V. 178; C. 70). Godavery Valley, W. T. Blanford, Esq.  
 Madras Pres. [P.]  
 β-γ. Hgr. (V. 201, 210; C. Bombay. Dr. Leith [P.]  
 70, 66).  
 δ-e. ♂ (V. 198; C. 67) & Deccan. Col. Sykes [P.]  
 ♀ (V. 208; C. 65).  
 ζ. Yg. (V. 184; C. 71). Calcutta. Sir J. Fayerer [P.]  
 η-θ, ι. ♂ (V. 202, 207; C. Nepal. B. H. Hodgson, Esq.  
 80, 78) & hgr. (V. 214; [P.]  
 C. 72).  
 κ. ♂ (V. 206; C. 71). Nepal. W. T. Blanford, Esq.  
 [P.]

- λ. ♀ (V. 200; C. 73). Kangra, Himalayas. Messrs. v. Schlagintweit [C.]
- μ. Hgr. (V. 184; C. 62). Sandoway, Aracan Coast. Major Bingham [P.]
- ν-ξ. ♂ (V. 183, 184; C. 65, 69). Toungoo. E. W. Oates, Esq. [P.]
- ο. ♂ (V. 188; C. 68). Tenasserim Coast. Dr. Packman [P.]
- π-ρ. Yg. (V. 187, 195; C. 67, 66). Siam. H. H. Newman, Esq. [P.]
- σ. ♀ (V. 201; C. 70). Camboja. M. Mouhot [C.]
- τ. ♀ (V. 207; C. ?). Pinang. Dr. Cantor.
- υ, φ. ♀ (V. 205; C. 66) & yg. (V. 196; C. 71). Java. J. Bowring, Esq. [P.]
- χ. ♂ (V. 197; C. 71). Java. G. Lyon, Esq. [P.]
- ψ, ω, αα. ♂ (V. 192; C. 56), ♀ (V. 199; C. 77), & yg. (V. 201; C. 74). Philippines. H. Cuming, Esq. [C.]
- bb. ♀ (V. 209; C. 70). Luzon. Dr. A. B. Meyer [C.]
- cc-dd. ♀ (V. 198; C. 63) & yg. (V. 183; C. 68). Butuan, Mindanao. A. Everett, Esq. [C.]
- ee. ♀ (V. 224; C. 76). Port Louis, Mauritius. L. Bouton, Esq. [P.]
- ff, gg. ♂ (V. 199, 198; C. 75, ?). Bourbon. L. Bouton, Esq. [P.]
- hh. Skull. Java.
- E. Each upper labial with a brown spot; no collar; no light spots or lines. (*L. unicolor*, Boic.)
- ii. Yg. (V. 205; C. 67). Madras. J. E. Boileau, Esq. [P.]

### 6. *Lycodon laoensis*. (PLATE XXIV. fig. 2.)

*Lycodon laoensis*, Günth. Rept. Brit. Ind. p. 317 (1864).

Snout much depressed but not spatulate; eye rather small. Rostral much broader than deep, just visible from above; internasals much shorter than the præfrontals; frontal once and one third to once and a half as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal elongate, separated from or but just touching the internasals; one præocular, in contact with the frontal; two postoculars; temporals small, 2+3; nine upper labials, third, fourth, and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales smooth, in 17 rows. Ventrals 179-185, obtusely angulate laterally; anal divided; subcaudals 68-73 pairs. Dark brown above, with a whitish cross band on the occiput and others on the back which bifurcate on the sides; lower parts white.

Total length 470 millim.; tail 100.

Siam.

- a, b. ♂ (V. 179; C. 68) & ♀ (V. 185; C. 68). Lao Mountains. M. Mouhot [C.]
- c. ♀ (V. 183; C. 73). Siam. } (Types.)

7. *Lycodon travancoricus*. (PLATE XXIV. fig. 3.)

*Cercaspis travancoricus*, *Beddome, Madras Monthly Journ. Med. Sc.* 1870.

*Lycodon travancoricus*, *Bouleng. Faun. Ind., Rept.* p. 293 (1890).

Snout much depressed, with swollen lips, subspatulate; eye rather small. Rostral much broader than long, hardly visible from above; internasals much shorter than the præfrontals; frontal once and one third to once and a half as long as broad, as long as its distance from the end of the snout or a little longer, a little shorter than the parietals; loreal elongate, rarely entering the eye, not touching the internasal; one præocular, usually in contact with the frontal; two postoculars; temporals small, scale-like, 2+3 or 3+3; nine upper labials, third, fourth, and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales smooth, in 17 rows. Ventrals 175-202, obtusely angulate laterally; anal undivided; subcaudals usually in two rows, sometimes single\*, 56-76. Coloration very similar to that of *L. striatus*, viz., dark brown or black above, with white cross bands and white lineolations on the sides, and uniform white below; but the upper lip is brown, or white spotted with brown.

Total length 600 millim.; tail 125.

Southern India, as far north as the Bombay Ghats.

<i>a.</i> ♀ (V. 178; C. 66).	Travancore Hills, 5000 ft.	Col. Beddome [C.] (Type.)
<i>b-c.</i> ♀ (V. 184; C. 68) & hgr. (V. 181; C. 69).	Travancore.	Col. Beddome [C.].
<i>d.</i> ♀ (V. 181; C. 56).	Trevandrum, Travancore.	H. S. Ferguson, Esq. [P.].
<i>e-i.</i> ♂ (V. 194; C. 75) & hgr. (V. 190, 199, 189, 190; C. 70, 71, 69, 68).	Anamallays, 4700 ft.	Col. Beddome [C.].
<i>k, l-m.</i> ♀ (V. 185; C. 64) & hgr. (V. 190, 200; C. 72, 71).	Anamallays.	Col. Beddome [C.].
<i>n-p.</i> ♀ (V. 201; C. 69) & hgr. (V. 190, 196; C. 76, 67).	Coonoor, Nilgherries, 5900 ft.	Col. Beddome [C.].
<i>q-r.</i> Hgr. (V. 202, 189; C. 68, 69).	Malabar.	Col. Beddome [C.].
<i>s-t.</i> Hgr. (V. 186; C. 72) & yg. (V. 175; C. 74).	Matheran, Bombay.	Dr. Leith [P.].

\* Out of 19 specimens examined, 14 have all the subcaudals paired; three (*b, d, g*) have them in part single ( $50 \frac{17}{17}$  1;  $4 \frac{69}{66}$  1;  $1 \frac{44}{11}$  1); and two (*a, c*) have them all single. Col. Beddome mentions another specimen with  $38 \frac{26}{26}$  1.



8. *Lycodon effrenis*.

- Lycodon effrenis*, Cantor, *Cat. Mal. Rept.* p. 70, pl. xl. fig. 2 (1847).  
*Tetragonosoma effrene*, Günth. *Cat.* p. 253 (1858), and *Rept. Brit. Ind.* p. 320, pl. xxiv. fig. K (1864); *Stoliczka, Journ. As. Soc. Beng.* xxxix. 1870, p. 203, pl. xi. fig. 3; *Steindachn. Sitzb. Ak. Wien, c.* 1891, p. 289, pl. ii. fig. 2.  
*Lycodon ophiteoides*, Bleek. *Nat. Tijdschr. Nederl. Ind.* xvi. 1859, p. 436.  
 — *adpersus*, Jan, *Elenco*, p. 97 (1863).

Snout much depressed, subspatulate; eye moderate. Rostral twice as broad as deep, just visible from above; internasals half as long as the præfrontals; frontal once and a half to once and two thirds as long as broad, as long as or a little longer than its distance from the end of the snout, shorter than the parietals; no loreal, præfrontal in contact with the second and third labials; a præocular, not reaching the frontal; two or three postoculars; temporals 2+3 or 3+3; nine upper labials, third, fourth, and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are longer than the posterior. Body slender. Scales smooth, in 17 rows. Ventrals 215–228, angulate laterally; anal entire; subcaudals 75–98 pairs. Brown above and below, with a few distant yellowish-white rings, some or all of which may become obsolete in the adult; young with a yellowish streak on each side of the top of the head.

Total length 700 millim.; tail 170.

Malay Peninsula, Borneo, Sumatra.

- |                         |                       |   |
|-------------------------|-----------------------|---|
| a. Yg. (V. 228; C. 83). | Great Hill of Pinang. | Dr. Cantor. (Type.)                               |
| b. ♂ (V. 215; C. 98).   | Sinkawang, Borneo.    | Dr. Bleeker. (Type<br>of <i>L. ophiteoides</i> .) |
| c. Yg. (V. 217; C. 98). | Deli, Sumatra.        | Prof. Moesch [C.].                                |

9. *Lycodon atropurpureus*.

- Lycodon atropurpureus*, Cantor, *Proc. Zool. Soc.* 1839, p. 50; *Bouleng. Faun. Ind., Rept.* p. 294 (1890), and *Ann. & Mag. N. H.* (6) vii. 1891, p. 462.  
 — *subfuscus*, Cantor, *l. c.*  
*Tetragonosoma atropurpureum*, Günth. *Rept. Brit. Ind.* p. 321 (1864).

Snout much depressed, with swollen lips, subspatulate; eye moderate. Rostral twice as broad as deep, scarcely visible from above; internasals as long as broad, half as long as the præfrontals; frontal once and two thirds as long as broad, as long as its distance from the end of the snout, shorter than the parietals; no loreal, præfrontal in contact with the second and third labials; one præocular, not in contact with the frontal; two postoculars; temporals small, scale-like, 3+4; nine upper labials, fourth and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales smooth, in 17 rows.

Ventrals 235-257, strongly angulate laterally; anal entire; subcaudals 78-91 pairs. Brown or purple above, uniform or with white and black marblings; belly whitish, or pale brown with yellowish dots and square blotches.

Total length 940 millim.; tail 170.

Bengal, Assam (?), Mergui.

#### 10. *Lycodon stormi*.

*Lycodon stormi*, *Boettg. Zool. Anz.* 1892, p. 418.

Head strongly depressed; eye small. Rostral not much broader than deep, just visible from above; internasals much shorter than the præfrontals; the latter longer than broad; frontal as long as the internasals and præfrontals together, much shorter than the parietals; loreal large, nearly as deep as long, not entering the eye; one præocular, not reaching the frontal; two postoculars; temporals 1+3; eight upper labials, third and fourth entering the eye; five lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales smooth, in 19 rows. Ventrals 217, angulate laterally; anal entire; subcaudals 75, all single. Slate-colour, with whitish annuli, which are most marked on the lower surface.

Total length 597 millim.; tail 109.

Celebes.

#### 11. *Lycodon albofuscus*.

*Sphecodes albofuscus*, *Dum. & Bibr.* vii. p. 394 (1854).

*Ophites albofuscus*, *Günth. Cat.* p. 207 (1858), and *Rept. Brit. Ind.* p. 323 (1864); *Bouleng. Ann. & Mag. N. II.* (5) xvi. 1885, p. 389; *Mocquard, N. Arch. Mus.* (3) ii. 1890, p. 144.

Snout moderately depressed, not spatulate; eye moderate. Rostral broader than deep, just visible from above; internasals half as long as the præfrontals; frontal as long as broad, as long as the præfrontals or a little longer, much shorter than the parietals; loreal a little longer than deep, not entering the eye; one præ- and two postoculars; temporals 2+2; eight upper labials, third, fourth, and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are a little shorter than the posterior. Body very slender. Scales in 17 rows, all strongly keeled. Ventrals 238-256, strongly angulate laterally; anal divided; subcaudals 155-208 pairs. Blackish brown above, young with yellow cross bands; yellowish beneath.

Total length 1770 millim.; tail 590.

Sumatra, Nias, Borneo.

a. ♂ (V. 238; C. 155).

Nias.

Hr. Sundermann [C.].

b. Yg. (V. 248; C. 204).

— ?

Purchased of M. Parzudaki.

12. *Lycodon fasciatus*.

*Ophites fasciatus*, *Anders. An. Zool. Res. Yunnan*, p. 827, pl. lxxviii. fig. 1 (1879).

*Lycodon fasciatus*, *Bouleng. Faun. Ind., Rept.* p. 295 (1890); *W. L. Slater, Journ. As. Soc. Beng.* lx. 1891, p. 234.

Snout depressed, not spatulate; eye rather small. Rostral nearly twice as broad as deep, just visible from above; internasals half as long as the præfrontals; frontal slightly longer than broad; loreal long and tapering to a point posteriorly, entering the eye, widely separated from the internasal; one præocular; two postoculars; temporals 2+2 or 2+3; eight upper labials, third, fourth, and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are as long as or shorter than the posterior. 17 rows of feebly keeled scales, the keels becoming more pronounced posteriorly. Ventrals 205-213, obtusely angulate; anal entire; subcaudals 77-90 pairs. Body encircled by broad purplish-black bands separated by yellowish or reddish intervals; the first black band does not encircle the neck.

Total length 530 millim.; tail 110.

Western Yunnan, Burma, Assam.

- |                       |                                   |                          |
|-----------------------|-----------------------------------|--------------------------|
| a. ♂ (V. 205; C. 77). | Shillong, Assam.                  | Gen. H. Collett [P.].    |
| b. ♀ (V. 207; C. 84). | Toungyi, Shan States,<br>5000 ft. | Lieut. Blakeway<br>[C.]. |

13. *Lycodon gammiei*.

*Ophites gammiei*, *Blanf. Journ. As. Soc. Beng.* xlvii. 1878, p. 130.

*Lycodon gammiei*, *Bouleng. Faun. Ind., Rept.* p. 296 (1890).

Head flat; eye small. Body slender, compressed. Rostral about as broad as deep; internasals much smaller than the præfrontals; frontal very little longer than broad, with convex sides; loreal small, elongate; one præocular; two postoculars; temporals irregular; eight upper labials, third, fourth, and fifth entering the eye; two elongate chin-shields of about equal length, the anterior in contact with five lower labials. Scales in 19 rows, the nine dorsal rows keeled, five rows at each side smooth. Ventrals 214, bluntly angulate at the sides; anal entire; subcaudals 101 pairs. Body surrounded by alternating dusky and light rings with very irregular crooked margins; head above dusky olivaceous with pale spots in the middle of most of the shields; an imperfect pale collar behind the head; lower surface of head and neck whitish.

Total length 800 millim.; tail 180.

South-eastern Sikkim.

14. *Lycodon carinatus*.

*Hurria carinata*, *Kuhl, Beitr. Zool. Veryl. Anat.* p. 95 (1820).

*Lycodon carinatus*, *Schleg. Phys. Serp.* ii. p. 109, pl. iv. figs. 6 & 7 (1837); *Bouleng. Faun. Ind., Rept.* p. 297 (1890).

*Cercaspis carinatus*, *Dum. & Bibr.* vii. p. 390 (1854); *Günth. Cat.* p. 207 (1858), and *Rept. Brit. Ind.* p. 324 (1864); *Jan, Icon. Gén.* 36, pl. vi. fig. 1 (1870).

Snout much depressed, broad but not spatulate; eye rather small. Rostral much broader than deep, visible from above; internasals much shorter than the præfrontals; frontal slightly longer than broad, as long as its distance from the end of the snout, shorter than the parietals; loreal elongate, not entering the eye, widely separated from the internasal; one præ- and two postoculars; temporals 2+3; nine upper labials, third, fourth, and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales in 19 rows, strongly keeled. Ventrals 188-198, angulate laterally; anal entire; subcaudals 52-64, in a single row. Black, encircled by white rings which are broader on the belly than on the back; these annuli are broader in the young, the back of the head of which is white.

Total length 490 millim.; tail 85.

Ceylon.

*a.* ♀ (V. 194; C. 55).  
*b, c, d, e, f-h.* ♀ (V. 192,  
194; C. 54, 55) & yg.  
(V. 198, 191, 190, 188,  
190; C. 52, 55, 54, 58,  
56).

Ceylon. B. H. Barnes, Esq. [P.]  
Ceylon.

### 15. *Lycodon subcinctus*.

*Russell, Ind. Serp.* ii. pl. xli. (1801).

*Lycodon subcinctus*, *Boie, Isis*, 1827, p. 551; *Schleg. Phys. Serp.* ii. p. 117, pl. iv. figs. 14 & 15 (1837); *Bouleng. Proc. Zool. Soc.* 1890, p. 34.

— *platurinus*, *Cantor, Cat. Mal. Rept.* p. 69 (1847).

*Ophites subcinctus*, *Dum. & Bibr.* vii. p. 398 (1854); *Günth. Cat.* p. 206 (1858), and *Rept. Brit. Ind.* p. 322 (1864); *Jan, Icon. Gén.* 36, pl. v. fig. 4 (1870); *Blauf. Proc. Zool. Soc.* 1881, p. 222, pl. xxi. fig. 2.

*Elapoides annulatus*, *Sauvage, Bull. Soc. Philom.* (7) viii. 1884, p. 144.

Snout much depressed, broad but not spatulate; eye rather small. Rostral much broader than deep, just visible from above; internasals much shorter than the præfrontals; frontal slightly longer than broad, shorter than its distance from the end of the snout, much shorter than the parietals; loreal elongate, usually entering the eye, widely separated from the internasal; no præocular; two or three postoculars; temporals 1+2; eight upper labials, third, fourth, and fifth (sometimes also the sixth) entering the eye; four lower labials in contact with the anterior chin-shields, which are usually longer than the posterior. Scales in 17 rows, dorsals feebly or faintly keeled. Ventrals 198-227, angulate laterally; anal divided (rarely entire); subcaudals 61-89 pairs. Dark brown or



black above, brown or yellowish brown below, with a white occipital blotch and widely-separated rings on the body and tail; these markings become less distinct or entirely disappear in the adult.

Total length 1000 millim.; tail 180.

Malay Peninsula, Sumatra, Borneo, Java, Philippines.

a. ♀ (V. 220; C. 71).	Pinang.	Dr. Cantor.
b. ♂ (V. 220; C. 79).	Singapore.	Dr. Dennys [P.].
c. ♀ (V. 226; C. 77).	Singapore.	W. T. Blanford, Esq. [P.].
d. Yg. (V. 220; C. 78).	Deli, Sumatra.	Prof. Moesch [C.].
e. ♀ (V. 219; C. 79).	Pajo, Sumatra.	Hr. C. Bock [C.].
f, g-h. ♂ (V. 215; C. 80) & yg. (V. 209, 214; C. 81, 83).	Nias.	Hr. Sundermann [C.].
i. ♂ (V. 216; C. ?).	Java.	A. Scott, Esq. [P.].
k. Yg. (V. 209; C. 67).	Salak, Java.	R. Kirkpatrick, Esq. [P.].
l. Yg. (V. 198; C. 61).	Mindanao.	Dr. A. B. Meyer [C.].

HURRIAH SANGUIVENTER, Cantor, Proc. Zool. Soc. 1839, p. 52, is probably a *Lycodon*.

"Claret-purple above, with metallic lustre; blood-coloured beneath. Ventrals 207; subcaudals 99, the 14 anterior of which are entire." (See Günther, Rept. Brit. Ind. p. 222, fig.)

Valley of Nepal.

#### 49. DINODON.

*Dinodon*, Dum. & Bibr. *Mém. Ac. Sc.* xxiii. 1853, p. 463, and *Ery Gén.* vii. p. 447 (1854); *Peters, Sitzb. Ges. naturf. Freunde*, 1881, p. 90.

*Lycodon*, part., *Günth. Cat. Col. Sn.* p. 201 (1858), and *Rept. Brit. Ind.* p. 315 (1864); *Jan, Elenco sist. Ofid.* p. 97 (1863).

*Eumesodon*, Cope, *Proc. Ac. Philad.* 1860, p. 262.

*Lepidocephalus*, Hallow. *Proc. Ac. Philad.* 1860, p. 498.

? *Proterodon*, Hallow. *l. c.*

Maxillary teeth 6+2 or 3+2 or 3, the anterior gradually increasing in size, the middle ones small, the last large, the three groups separated by distinct interspaces; anterior mandibular teeth enlarged. Head slightly distinct from neck; eye rather small, with vertically elliptic pupil. Body more or less elongate; scales

Fig. 24.



Maxillary and mandible of *Dinodon rufozonatus*.

smooth or feebly keeled, with apical pits, in 17 (or 21) rows; ventrals angulate laterally. Tail moderate; subcaudals in two rows.

China and Japan; Himalayas (?).

*Synopsis of the Species.*

- I. Scales smooth, in 17 rows ; anal entire.
1. *rufozonatus*, p. 361.
- II. Scales feebly keeled, in 17 rows.
- A. Anal entire ; a præocular.
- Portion of rostral visible from above  
half as long as its distance from the  
frontal . . . . . 2. *semicarinatus*, p. 362.
- Rostral just visible from above . . . . . 3. *septentrionalis*, p. 363.
- B. Anal divided ; no præocular, loreal entering the eye.
4. *japonicus*, p. 363.
- III. Scales feebly keeled, in 21 rows ; anal divided.
5. *tessellatus*, p. 364.

1. *Dinodon rufozonatus*.

*Lycodon rufozonatus*, *Cantor, Zool. Chusan*, pl. xi. (1840), and *Ann. & Mag. N. H.* ix. 1842, p. 483 ; *Günth. Cat.* p. 204 (1858), and *Rept. Brit. Ind.* p. 319 (1864) ; *Jan, Icon. Gén.* 36, pl. iv. fig. 3 (1870).

*Dinodon cancellatum*, *Dum. & Bibr.* vii. p. 447 (1854).

*Coronella striata*, *Hallow. Proc. Ac. Philad.* 1856, p. 152.

*Eumesodon striatus*, *Cope, Proc. Ac. Philad.* 1860, p. 263.

*Dinodon rufozonatus*, *Peters, Sitz. Ges. naturf. Freunde*, 1881, p. 89.

— *rufozonatus*, var. *formosana*, *Boettg. Ber. Offenb. Ver. Nat.* 24-25, 1885, p. 124.

Rostral a little broader than deep, visible from above ; internasals much shorter than the præfrontals ; frontal as long as broad or a little longer, as long as its distance from the rostral, shorter than the parietals ; loreal elongate, sometimes entering the eye ; one præocular ; two postoculars (rarely one) ; temporals 2+3 ; eight (rarely seven) upper labials, third, fourth, and fifth (rarely second, third, and fourth, or only fourth and fifth) entering the eye ; five (rarely four) lower labials in contact with the anterior chin-shields, which are as long as or longer than the posterior. Scales smooth, in 17 rows. Ventrals 185-204 ; anal entire ; subcaudals 57-83. Yellowish, reddish, or pale brown above, with dark brown cross bars wider than their interspaces, and an alternating lateral series of dark brown spots ; upper head-shields dark brown, with yellowish borders ; upper lip and lower parts yellowish ; lower surface of tail spotted with brown.

Total length 1020 millim. ; tail 190.

China and Corea.

- |  |                  |                        |
|--|------------------|------------------------|
| <i>a.</i> ♂ (V. 202 ; C. 73).                          | Hoi-How, Hainan. | J. Neumann, Esq. [P.]. |
| <i>b-c.</i> ♂ (V. 189 ; C. 76) & yg. (V. 199 ; C. 83). | Formosa.         | R. Swinhoe, Esq. [C.]. |

<i>d-k.</i> ♀ (V. 199, 198; C. 71, 73), hgr. (V. 204; C. 75), & yg. (V. 193, 199, 192, 190; C. 73, 81, 76, 79).	Formosa.	Taiwanfoo Museum [P.].
<i>l.</i> Hgr. (V. 193; C. 72).	Chusan.	Dr. Cantor. (Type.)
<i>m, n-p.</i> ♂ (V. 190; C. 65) & yg. (V. 198; 201, 185; C. 57, 68, 69).	Shanghai.	R. Swinhoe, Esq. [C.].
<i>q.</i> Hgr. (V. 203; C. 67).	Kiukiang Mountains.	C. Maries, Esq. [C.].
<i>r.</i> ♀ (V. 203; C. 72).	Mountains north of Kiukiang.	A. E. Pratt, Esq. [C.].
<i>s.</i> ♂ (V. 204; C. 72).	Kia-tiang-fu, Prov. Sze Chuen, 1070 ft.	A. E. Pratt, Esq. [C.].
<i>t-v.</i> ♀ (V. 194, 193, 204; C. 65, 65, 62).	Western Hills of Peking.	S. W. Bushell, Esq. [P.].
<i>w, x.</i> ♂ (V. 204, 202; C. 68, 68).	Tsu Shima.	Mr. Holst [C.].
<i>y.</i> ♂, skel.	China.	R. Swinhoe, Esq. [C.].

## 2. *Dinodon semicarinatus*.

*Eumesodon semicarinatus*, *Cope, Proc. Ac. Philad.* 1860, p. 263, and 1861, p. 75.

*Lepidocephalus fasciatus*, *Hallow. Proc. Ac. Philad.* 1860, p. 498.

*Dinodon semicarinatus*, *Bouleng. Ann. & Mag. N. II.* (6) x. 1892, p. 302.

Rostral nearly as deep as broad, the portion visible from above half as long as its distance from the frontal; internasals much shorter than the præfrontals; frontal once and one fifth to once and one third as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal twice as long as deep, not entering the eye; one præ- and two postoculars; temporals 2+3; eight upper labials, third, fourth, and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are as long as the posterior. Scales keeled along their anterior half, in 17 rows. Ventrals 211-234; anal entire; subcaudals 65-101. Above with broad black cross bands separated by narrow yellowish-brown interspaces; head black above; labials yellowish, with black sutures; lower parts yellowish, tail spotted with black.

Total length 1100 millim.; tail 230.

Loo Choo Islands.

<i>a.</i> ♂ (V. 234; C. 97).	Oho Sima.	Lieut. A. Carpenter [P.]. H.M.S. 'Magpie.'
<i>b-c.</i> ♂ (V. 228; C. 101) & yg. (V. 211; C. 93).	Great Loo Choo Island.	Mr. Holst [C.].

3. *Dinodon septentrionalis*.

*Ophites septentrionalis*, *Günth. Proc. Zool. Soc.* 1875, p. 233.

— *ruhstrati*, *Fischer, Abh. naturw. Ver. Hamb.* ix. 1886, p. 16, pl. ii. fig. 6.

*Lycodon septentrionalis*, *Bouleng. Faun. Ind., Rept.* p. 295 (1890).

Rostral broader than deep, just visible from above; internasals much shorter than the præfrontals; frontal as broad as long or slightly longer, as long as its distance from the end of the snout, shorter than the parietals; loreal longer than deep, not touching the eye, but wedged in between the third labial and the præocular; one præ- and two postoculars; temporals 2+3; eight upper labials, third, fourth, and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are nearly as long as or longer than the posterior. Scales in 17 rows, those of the 7 or 9 median rows feebly keeled. Ventrals 211-224; anal entire; subcaudals 83-104.

Total length 900 millim.; tail 200.

Southern China, Himalayas (?).

A. Black above and on the sides, with narrow whitish transverse bands, forming complete annuli on the tail, the lower surface of which is dark brown; belly whitish, with a few scattered small brown spots posteriorly. (*O. septentrionalis*, Gthr.)

a. ♀ (V. 214; C. 83). Himalayas or Khasi T. C. Jerdon, Esq. [P.].  
Hills (?). (Type.)

B. Above with large dark brown spots or cross bands separated by pale greyish-brown interspaces; on the anterior part of the body the dark bands are much wider than the light ones, whilst it is the reverse on the hind part; a lateral series of dark brown spots, partly on the ventrals, alternating with the dorsal bands; belly yellowish, spotted or dotted with brown posteriorly. (*O. ruhstrati*, Fisch.)

b-c. ♀ (V. 216, 224; C. 104, 97). Formosa. R. Swinhoe, Esq. [C.].

d. Hgr. (V. 211; C. 88). Mountains north of Kiukiang. A. E. Pratt, Esq. [C.].

4. *Dinodon japonicus*.

*Ophites japonicus*, *Günth. Ann. & Mag. N. II.* (5) vi. 1880, p. 462;

*F. Müll. Verh. nat. Ges. Basel*, viii. 1887, p. 271.

— *orientalis*, *Hilgend. Sitzb. Ges. naturf. Freunde*, 1880, p. 115, pl. —, figs. 1-5.

? *Eumesodon carinatus*, *F. Müll. Verh. nat. Ges. Basel*, vii. 1885, p. 685.

Rostral much broader than deep, just visible from above; internasals about half as long as the præfrontals; frontal a little longer than broad, as long as its distance from the end of the snout, shorter



than the parietals; loreal elongate, entering the eye; no præocular; two postoculars; temporals 2+3; eight upper labials, third, fourth, and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are as long as the posterior, or a little longer. Scales with a very faint keel along their anterior half, in 17 rows. Ventrals 200-208; anal divided; subcaudals 68-74. Pale greyish brown above, with black cross bands, the outer portion of which is narrowly detached on the side; upper surface of head blackish; lower parts yellowish, dotted with black, and with a lateral series of black spots alternating with the dorsal bands.

Total length 660 millim.; tail 120.

Japan.

a-b. ♀ (V. 202, 205; Nikko, Central C. Maries, Esq. [C.]  
C. 68, 70). Japan. (Types.)

### 5. *Dinodon?* *tessellatus*.

*Proterodon tessellatus*, *Hallow. Proc. Ac. Philad.* 1860, p. 499.

Loreal quite small; a præocular; two postoculars; temporals 2+2; eight upper labials, fourth and fifth entering the eye. Scales with a slight keel extending halfway along the middle, in 21 rows. Ventrals 211; anal divided; subcaudals 73. Olive above; belly orange, tessellated with black.

Total length 900 millim.

Japan.

### 50. *STEGONOTUS*.

*Lycodon*, part., *Schleg. Phys. Serp.* ii. p. 104 (1837); *Dum. & Bibr. Erp. Gén.* vii. p. 367 (1854); *Jan, Elenco sist. Ofid.* p. 97 (1863). *Stegonotus*, *Dum. & Bibr. Mém. Ac. Sc.* xxiii. 1853, p. 477, and *Erp. Gén.* vii. p. 680.

*Herpetodryas*, part., *Jan, l. c.* p. 80.

*Lielaphis*, *Günth. Proc. Zool. Soc.* 1863, p. 59, and 1877, p. 129.

*Zamenophis*, *Günth. Ann. & Mag. N. H.* (4) ix. 1872, p. 21.

*Pseudolycon*, *Peters, Mon. Berl. Ac.* 1876, p. 534.

? *Herbertophis*, *Macleay, Proc. Linn. Soc. N. S. W.* viii. 1884, p. 434.

Maxillary teeth 15 to 20, increasing in size towards the middle of the series, then decreasing in size to the two or three last, which

Fig. 25.



Maxillary and mandible of *Stegonotus modestus*.

are again large; anterior mandibular teeth enlarged. Head more or less distinct from neck; eye moderate or rather small, with

vertically elliptic pupil. Body elongate, cylindrical or feebly compressed; scales smooth, with apical pits, in 17 rows; ventrals obtusely angulate laterally. Tail moderate or long; subcaudals in double or single row.

Philippines; Moluccas; Papuaasia; Queensland.

*Synopsis of the Species.*

I. Not more than 100 subcaudals.

A. Two labials entering the eye.

1. Ventrals 175-212.

a. Subcaudals in two rows.

Rostral a little broader than deep, the portion visible from above measuring one third to one half its distance from the frontal; fourth and fifth labials entering the eye . . . . .

1. *cucullatus*, p. 365.

Rostral much broader than deep, the portion visible from above measuring about one fourth its distance from the frontal; usually third and fourth labials entering the eye . . . . .

2. *modestus*, p. 366.

b. Subcaudals single. . . . .

3. *heterurus*, p. 367.

2. Ventrals 220-232. . . . .

4. *muelleri*, p. 367.

B. Three labials entering the eye; ventrals 210-236.

One præocular . . . . .

5. *batjanensis*, p. 368.

Two præoculars . . . . .

6. *plumbeus*, p. 368.

II. 112-123 subcaudals; rostral slightly

broader than deep . . . . .

7. *dumerilii*, p. 368.

1. *Stegonotus cucullatus*.

*Lycodon modestus*, part., *Schleg. Phys. Serp.* ii. p. 119 (1837).

— *cucullatum*, *Dum. & Bibr.* vii. p. 376 (1854).

*Zamenophis australis*, *Günth. Ann. & Mag. N. H.* (4) ix. 1872, p. 21, and *Proc. Zool. Soc.* 1877, p. 130.

*Lycodon magnus*, *A. B. Meyer, Mon. Berl. Ac.* 1874, p. 136.

— *keyensis*, *Doria, Ann. Mus. Genova*, vi. 1874, p. 351, pl. xii. fig. h.

? *Lycodon darnleyensis*, *Macleay, Proc. Linn. Soc. N. S. W.* ii. 1877, p. 38.

*Lielaphis cucullatus*, *Peters & Doria, Ann. Mus. Genova*, viii. 1878, p. 396.

— *keyensis*, *Peters & Doria, l. c.* p. 398.

Rostral a little broader than deep, the portion visible from above measuring one third to one half its distance from the frontal; internasals about two thirds the length of the præfrontals; frontal as long as broad or a little longer, nearly as long as its distance from the end of the snout, much shorter than the parietals; loreal

longer than deep; two præ- and two postoculars; temporals 1+2 or 2+2; nine upper labials, fourth and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are as long as or a little longer than the posterior. Scales in 17 rows. Ventrals 196-207; anal entire; subcaudals 73-90 pairs. Brown above, yellowish beneath; usually a brown spot at the outer end of each ventral.

Total length 1080 millim.; tail 180.

Papuasias and Cape York.

- a-b. Hgr. (V. 202, 204; C. 75, 78). Fly River, New Guinea. Rev. S. Macfarlane [C].  
 c-e. ♂ (V. 196; C. ?) & hgr. (V. 198, 197; C. ?, 79). Murray Island, Torres Straits. Rev. S. Macfarlane [C].  
 f. Hgr. (V. 204; C. 79). Cape York. (Type of *Zamenophis australis*.)

## 2. *Stegonotus modestus*.

*Lycodon modestus*, part., *Schleg. Phys. Serp.* ii. p. 119, pl. iv. figs. 16 & 17 (1837).

— *modestum*, *Dum. & Bibr.* vii. p. 379 (1854).

— *lividum*, *Dum. & Bibr. t. c.* p. 381; *Jan, Icon. Gén.* 36, pl. iv. fig. 4 (1870).

*Coronella rosenbergii*, *Bleek. Nat. Tijdschr. Nederl. Ind.* xxii. 1860, p. 37.

*Ablabes greineri*, *Bleek. l. c.* p. 43.

*Coluber holochrous*, *Günth. Proc. Zool. Soc.* 1863, p. 59, fig.

*Brachyrhyton modestum*, *Jan, Icon. Gén.* 35, pl. ii. fig. 1 (1870).

*Lycodon parvus*, *A. B. Meyer, Mon. Berl. Ac.* 1874, p. 137.

— *aruensis*, *Doria, Ann. Mus. Genova*, vi. 1874, p. 352, pl. xii. fig. i; *Sauvage, Bull. Soc. Philom.* (7) iii. 1879, p. 61.

*Pseudolyconon lividus*, *Peters, Mon. Berl. Ac.* 1876, p. 533.

*Lielaphis modestus*, part., *Günth. Proc. Zool. Soc.* 1877, p. 129.

— *modestus*, *Peters & Doria, Ann. Mus. Genova*, viii. 1878, p. 397.

— *lividus*, *Peters & Doria, l. c.* p. 396.

Rostral much broader than deep, the portion visible from above measuring about one fourth its distance from the frontal; internasals about two thirds the length of the præfrontals; frontal as long as broad or a little longer, as long as or a little shorter than its distance from the end of the snout, much shorter than the parietals; loreal longer than deep; two (rarely one) præ- and two postoculars; temporals 1+2 or 2+2; seven or eight (rarely nine) upper labials, third and fourth (rarely fourth and fifth) entering the eye; four or five lower labials in contact with the anterior chin-shields, which are as long as or a little longer than the posterior. Scales in 17 rows. Ventrals 175-212; anal entire; subcaudals 68-100 pairs. Upper parts brown, upper lip and lower parts yellowish; a brown spot may be present at the outer end of each ventral.

Total length 1120 millim.; tail 260.

Moluccas and Papuasias.

- a. Hgr. (V. 107; C. ?). Ceram. Dr. Bleeker.  
(Type of *C. rosenbergii*.)
- b. ♂ (V. 212; C. 92). N. Ceram. Dr. Bleeker.  
(Type of *L. holochrous*.)
- c. Hgr. (V. 208; C. 86). Amboyna. Dr. Bleeker.  
(Type of *A. greineri*.)
- d. ♀ (V. 195; C. 83). Mysol.
- e. ♀ (V. 192; C. 74). New Guinea. Rev. S. Macfarlane [C.].
- f. Hgr. (V. 175; C. 92). Mansinam, New  
Guinea.
- g-h, i-k. ♂ (V. 189, 184; Murray Id., Rev. S. Macfarlane [C.].  
C. 70, 63), ♀ (V. 186; Torres Straits.  
C. 68), & yg. (V. 181;  
C. 71).
- l. Yg. (V. 197; C. 86). Duke of York Id. Rev. G. Brown [C.].

### 3. *Stegonotus heterurus*. (PLATE XXV. fig. 1.)

*Lielaphis modestus*, part., *Günth. Proc. Zool. Soc.* 1877, p. 129.

Rostral much broader than deep, the portion visible from above measuring about one fourth its distance from the frontal; internasals about two thirds the length of the præfrontals; frontal as long as broad or slightly longer, as long as its distance from the rostral, much shorter than the parietals; loreal longer than deep; two præoculars; one or two postoculars, the lower being often (spec. *a, c*) fused with the fourth labial; temporals 2+2; seven upper labials, third and fourth entering the eye; four lower labials in contact with the anterior chin-shields, which are as long as or a little longer than the posterior. Scales in 17 rows. Ventrals 178-188; anal entire; subcaudals 75-82, single (or a few divided). Blackish brown above; ventrals, subcaudals, and outer row of scales brown, with yellowish posterior border.

Total length 540 millim.; tail 135.

Duke of York Island and New Britain.

- a, b. Hgr. (V. 182, 178; Duke of York Id. Rev. G. Brown [C.].  
C. 75, 81).
- c. Hgr. (V. 188; C. 82). New Britain. Museum Godeffroy.

### 4. *Stegonotus muelleri*\*.

*Stegonotus muelleri*, *Dum. & Bibr.* vii. p. 682 (1854).

*Spilotes samarensis*, *Peters, Mon. Berl. Ac.* 1861, p. 685.

*Herpetodryas muelleri*, *Jan, Eleuco*, p. 81 (1863).

Frontal as long as or a little longer than broad; loreal longer than deep; two præ- and two postoculars; temporals 2+3; nine upper labials, fourth and fifth entering the eye. Scales in 17 rows. Ventrals 220-232; anal entire; subcaudals 100 pairs. Uniform brown above; lips and lower parts dirty yellowish white.

Total length 2070 millim.; tail 390.

Samar Island, Philippines.

\* I am indebted to Dr. Mocquard for notes on the type specimen.



5. *Stegonotus batjanensis*.

*Coluber* (*Lielaphis*) *batjanensis*, *Günth. Ann. & Mag. N. H.* (3) xv. 1865, p. 93, pl. ii. fig. A.

Rostral much broader than deep, the portion visible from above measuring about one fourth its distance from the frontal; internasals about half as long as the præfrontals; frontal once and one third to once and a half as long as broad, as long as its distance from the end of the snout, much shorter than the parietals; loreal longer than deep; one præ- and two postoculars; temporals 1+2 or 2+2; eight upper labials, third, fourth, and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are as long as or a little longer than the posterior. Scales in 17 rows. Ventrals 210-236; anal entire; subcaudals 78-87 pairs. Blackish brown above, paler brown on the head; young with yellowish-white narrow cross bars which widen towards the belly and the anterior of which are broken up on the middle of the back and alternate; these markings become indistinct in the adult; sides of head yellowish, the shields black-edged; lower parts yellowish, the lateral ends of the ventrals and the subcaudals edged with black.

Total length 1500 millim.; tail 300.

Moluccas.

a. ♀ (V. 236; C. 78).

b-c. Hgr. (V. 210; C. 87)

& yg. (V. 222; C. 82).

Batjan.

Gilolo.

Dr. Bleeker. (Type.)

Dr. Platen [C.]

6. *Stegonotus? plumbeus*.

*Herbertophis plumbeus*, *Macleay, Proc. Linn. Soc. N. S. W.* viii. 1884, p. 434.

Frontal short and broad; loreal oblong; two præ- and two postoculars; nine upper labials, third, fourth, and fifth entering the eye. Scales in 17 rows. Ventrals 219; anal entire; subcaudals 74 pairs. Uniform nitid leaden-black above, yellowish white on the belly; the scales on the sides showing white edges as they approach the ventral shields; subcaudals each with a black basal patch.

Total length 1200 millim.; tail 235.

Herbert River, Queensland.

7. *Stegonotus dumerilii*.

*Lycodon mülleri*, *Dum. & Bibr.* vii. p. 382 (1854); *Günth. Cat.* p. 203 (1853).

*Odontomus mülleri*, *Günth. Proc. Zool. Soc.* 1879, p. 78.

Rostral slightly broader than deep, the portion visible from above measuring one third to one half its distance from the frontal; internasals about two thirds the length of the præfrontals; frontal once and one third to once and a half as long as broad, as long as

its distance from the end of the snout, much shorter than the parietals; loreal as long as deep or a little longer; two præ- and two postoculars; temporals 2+2 or 2+3; nine upper labials, fourth and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields, which are a little longer than the posterior. Scales in 17 rows. Ventrals 195-214; anal entire; subcaudals 112-123. Greyish brown above, with a dorsal series of large oval or subquadrangular brown, black-edged spots and, on each side, a series of smaller spots alternating with the dorsals; head spotted or marbled with brown; yellowish beneath, uniform or with scattered brown dots.

Total length 740 millim.; tail 220.

Philippines.

- a. ♀ (V. 210; C. 123). Surigao. A. Everett, Esq. [C].  
 b, c, d. ♀ (V. 203, 214, Philippines. H. Cuming, Esq. [C].  
 195; C. 114, 118, 112).

### 51. DRYOCALAMUS.

*Nympha* (non *Martini*), *Fitzing. N. Class. Rept.* p. 29 (1826).

*Lycodon*, part., *Schleg. Phys. Serp.* ii. p. 104 (1837).

*Odontomus* (non *Kirby*), *Dum. & Bibr. Mém. Ac. Sc.* xxiii. 1853, p. 463, and *Erp. Gén.* vii. p. 450 (1854); *Günth. Cat. Col. Sn.* p. 206 (1858); *Jan, Elenco sist. Ofid.* p. 95 (1863); *Günth. Rept. Brit. Ind.* p. 233 (1864).

*Dryocalamus*, *Günth. Cat.* p. 121.

*Hydrophobus*, *Günth. Ann. & Mag. N. H.* (3) ix. 1862, p. 127; *Bouleng. Faun. Ind., Rept.* p. 297 (1890).

*Nymphophidium*, *Günth. Rept. Brit. Ind.* p. 235.

Ulupe, *Blanford, Journ. As. Soc. Beng.* xvii. 1878, p. 129.

Maxillary teeth 8 to 10, rather short but stout, increasing in size posteriorly; anterior mandibular teeth a little longer than the posterior; one or two more or less distinct tooth-like knobs on the basisphenoid. Head distinct from neck, much depressed; eye moderate or rather large, with vertically elliptic pupil. Body slender, slightly compressed; scales smooth, in 13 or 15 rows, with apical pits; ventrals strongly keeled on each side. Tail moderate; subcaudals in two rows.

South-eastern Asia.

#### *Synopsis of the Species.*

##### I. One or two præoculars.

- Rostral not twice as broad as deep; scales  
 in 13 rows ..... 1. *nympha*, p. 370.  
 Rostral not twice as broad as deep; scales  
 in 15 rows ..... 2. *subannulatus*, p. 371.  
 Rostral twice as broad as deep; scales  
 in 15 rows ..... 3. *gracilis*, p. 371.

## II. No præocular.

- Scales in 13 rows . . . . . 4. *davisonii*, p. 372.  
 Scales in 15 rows . . . . . 5. *tristrigatus*, p. 372.

1. *Dryocalamus nympha*.

*Russell, Ind. Serp.* i. pls. xxxvi. & xxxvii. (1796).

*Coluber nympha*, *Daud. Rept.* vi. p. 244, pl. lxxv. fig. 1 (1803).

*Lycodon nympha*, *Schleg. Phys. Serp.* ii. p. 120 (1837).

*Odontomus nympha*, *Dum. & Bibr.* vii. p. 450 (1854); *Günth. Cat.*

p. 206 (1858), and *Rept. Brit. Ind.* p. 233 (1864); *Jan, Icon.*

*Gén.* 38, pl. v. fig. 2 (1870).

*Hydrophobus semifasciatus*, *Günth. Ann. & Mag. N. II.* (3) ix.

1862, p. 127, pl. ix. fig. 6.

*Odontomus semifasciatus*, *Günth. Rept. Brit. Ind.* p. 234.

— *nympha*, var. *ceylonensis*, *F. Müll. Verh. nat. Ges. Basel*, viii. 1887, p. 269.

*Hydrophobus nympha*, *Bouleng. Faun. Ind., Rept.* p. 298 (1890).

Rostral not twice as broad as deep, visible from above; nasal entire or divided; suture between the internasals usually as long as that between the præfrontals or a little shorter; frontal longer than its distance from the end of the snout, shorter than the parietals; loreal longer than deep, usually entering the eye; one or two præoculars; two postoculars; temporals 2+2 or 2+3; seven (exceptionally eight or six) upper labials, third and fourth entering the eye; three or four labials in contact with the anterior chin-shields, which are longer than the posterior. Scales in 13 rows. Ventrals 200–243; anal divided; subcaudals 65–88. Whitish, with or without small brown spots, and with large elliptic dark brown or black spots much longer than the interspaces between them; a large brown spot nearly covers the upper surface of the head and is separated from the first dorsal spot by a narrow white occipital band; upper lip and lower parts uniform white.

Total length 460 millim.; tail 90.

Southern India and Ceylon.

- a-b.* Hgr. (V. 243, 235; Cuddapa Hills. Col. Beddome [C].  
 C. 87, 85).  
*c-d.* ♂ (V. 231, 225; C. Vellore. Dr. P. Russell. (Types.)  
 83, 77).  
*e-f.* ♂ (V. 219; C. 71) & S. Arcot, near Col. Beddome [C].  
 ♀ (V. 216; C. 71). coast.  
*g-i.* ♂ (V. 231; C. 75) & Balarangam Hills. Col. Beddome [C].  
 hgr. (V. 220, 223; C.  
 74, 75).  
*k.* Hgr. (V. 223; C. 65). Collegal, Balara- Col. Beddome [C].  
 rangams.  
*l.* ♀ (V. 232; C. 77). Salem district. Col. Beddome [C].  
*m.* Hgr. (V. 238; C. 77). Trichinopoly. Col. Beddome [C].  
*n.* Hgr. (V. 231; C. 83). Nallymally. Col. Beddome [C].  
*o.* ♀ (V. 220; C. 80). Travancore. Col. Beddome [C].  
*p.* ♀ (V. 211; C. 80). Trincomalee. Col. Yerbury [P].  
*q.* ♂ (V. 219; C. 2). Ceylon. Sir A. Smith [P].

r-s. Hgr. (V. 213, 215; C. 73, 75).	Ceylon.	Dr. A. Günther [P.].
t. Hgr. (V. 200; C. 88).	Ceylon.	W. Ferguson, Esq. [P.].
u. ♂ (V. 206; C. 80).	Ceylon.	Col. Beddome [C.].
v. Hgr. (V. 232; C. 84).	—?	T. C. Eyton, Esq. [P.]. (Type of <i>H. semifasciatus</i> .)

## 2. *Dryocalamus subannulatus*.

*Odontomus subannulatus*, *Dum. & Bibr.* vii. p. 454 (1854); *Jan, Icon. Gén.* 36, pl. v. fig. 3 (1870).

*Nymphophidium maculatum*, *Günth. Rept. Brit. Ind.* p. 235, pl. xix. fig. H (1864); *F. Müll. Verh. nat. Ges. Basel*, vii. 1882, p. 150.

— *subannulatum*, *Blanf. Proc. Zool. Soc.* 1881, p. 219.

*Hydrophobus subannulatus*, *Bouleng. Faun. Ind., Rept.* p. 297 (1890).

Rostral not twice as broad as deep, visible from above; nasal divided or semidivided; suture between the internasals as long as or longer than that between the præfrontals; frontal once and a half as long as broad, longer than its distance from the end of the snout, shorter than the parietals; loreal longer than deep, entering the eye; one præ- and two postoculars; temporals 2+2; seven upper labials, third and fourth entering the eye; three or four lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales in 15 rows. Ventrals 225-244; anal entire; subcaudals 93-107. Pale brownish above, with a dorsal series of large brown transverse spots, and, on each side, a series of small spots alternating with the dorsals; a brown band across the præfrontals, another between the eyes, and a large brown blotch on the parietals; yellowish beneath.

Total length 295 millim.; tail 70.

Sumatra, Singapore, Pinang.

a. ♂ (V. 244; C. 107).	Singapore?	Gen. Hardwicke [P.]. (Type of <i>N. maculatum</i> .)
b. ♀ (V. 225; C. 93).	Sumatra.	Dr. Bleeker. ( <i>Coronella prosopion</i> , Blkr.)

## 3. *Dryocalamus gracilis*. (PLATE XXV. fig. 2.)

*Odontomus gracilis*, *Günth. Rept. Brit. Ind.* p. 234 (1864).

— *fergusonii*, *Haly, Taprobanian*, iii. 1888, p. 51.

*Hydrophobus gracilis*, *Bouleng. Faun. Ind., Rept.* p. 298 (1890).

Rostral twice as broad as deep, just visible from above; nasal semidivided; suture between the internasals as long as that between the præfrontals; frontal longer than its distance from the end of the snout, shorter than the parietals; loreal longer than deep, entering the eye, separated from the supraocular by a small præocular; two postoculars; temporals 2+3; seven upper labials, third and fourth entering the eye; four lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales in 15 rows. Ventrals 200-234; anal entire; subcaudals 75-85. Whitish, each scale brown in the centre, with large dark



brown spots separated by narrower interspaces; these brown spots much shorter, roundish, on the hinder part of the body; head dark brown above, separated from the first dorsal spot by a narrow white collar; upper lip and lower parts uniform white.

Total length 530 millim.; tail 100.

Southern India and Ceylon.

- |                          |                  |                              |
|--------------------------|------------------|------------------------------|
| a. ♂ (V. 234; C. 83).    | Anamallay Hills. | Col. Beddome [C.]<br>(Type.) |
| b. Hgr. (V. 234; C. 85). | Cuddapa Hills.   | Col. Beddome [C.].           |

#### 4. *Dryocalamus davisonii*.

*Ulupe davisonii*, *Blanf. Journ. As. Soc. Beng.* xlvii. 1878, p. 128, and *Proc. Zool. Soc.* 1881, p. 221; *Boettg. Ber. Offenb. Ver. Naturk.* 1888, p. 55.

*Hydrophobus davisonii*, *Bouleng. Faun. Ind., Rept.* p. 299 (1890).

Rostral not twice as broad as deep, visible from above; nasal undivided; suture between the internasals as long as that between the præfrontals; frontal longer than its distance from the end of the snout, shorter than the parietals; loreal longer than deep, entering the eye; no præocular: one or two postoculars; temporals 1+2 (or 2+2); seven upper labials, third and fourth entering the eye; four lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales in 13 rows. Ventrals 235-265; anal entire; subcaudals 91-108. Above with dark brown or black elongate spots separated by white or pale brown narrower interspaces; on the hinder half of the body the brown spots become smaller or may be broken up; snout brown, connected with the first dorsal brown spot by a longitudinal brown band, the rest of the head being whitish; lower parts whitish, tail mottled with brown.

Total length 670 millim.; tail 150.

Tenasserim, Siam, Cochinchina.

- |   |              |                                   |
|---|--------------|-----------------------------------|
| a-b. ♂ (V. 236; C. 91) & ♀ (V. 235; C. 96). | Cochinchina. | E. C. Cox-Smith, Esq. [P.].       |
| c. ♂ (V. 254; C. 99).                       | Annam.       | City Hall Mus., Hongkong<br>[E.]. |

#### 5. *Dryocalamus tristrigatus*. (PLATE XXV. fig. 3.)

*Dryocalamus tristrigatus*, *Günth. Cat.* p. 121 (1858).

Rostral a little broader than deep, the portion visible from above half as long as its distance from the frontal; nasal undivided; suture between the internasals shorter than that between the præfrontals; frontal once and a half as long as broad, longer than its distance from the end of the snout, shorter than the parietals; loreal nearly twice as long as deep, entering the eye; no præocular; two postoculars; temporals 2+2 or 2+3; seven upper labials, third and fourth entering the eye; four lower labials in contact with the anterior chin-shields; posterior chin-shields very short.

Scales in 15 rows. Ventrals 224; anal entire; subcaudals 86. Dark brown above with three white stripes; upper head-shields edged with white; upper lip, outer row of scales, and lower surfaces white.

Total length 360 millim.; tail 80.

Habitat unknown.

a. ♀ (V. 224; C. 86). — ? Haslar Collection. (Type.)

## 52. PSEUDASPIS.

Duberria, part., *Fitzing. N. Class. Rept.* p. 29 (1826).

Coluber, part., *Schleg. Phys. Serp.* ii. p. 125 (1837).

Coronella, part., *Dum. & Bibr. Erp. Gén.* vii. p. 607 (1854); *Günth.*

*Cat. Col. Sn.* p. 34 (1858); *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 236.

Pseudaspis, *Cope, Proc. Ac. Philad.* 1864, p. 168.

Cadmus (*non Bory*), *Theob. Cat. Rept. As. Soc. Mus.* p. 58 (1868).

Maxillary teeth 12 to 14, posterior longest; anterior mandibular teeth much longer than the posterior. Head slightly distinct from neck; eye moderate or rather small, with round pupil. Internasal entering the nostril. Body cylindrical; scales smooth, with apical pits, in 27 to 31 rows; ventrals rounded. Tail moderate; subcaudals in two rows.

South Africa.

### 1. *Pseudaspis cana*.

*Coluber canus*, *Linn. Mus. Ad. Frül.* i. p. 31, pl. xi. fig. 1 (1754), and *S. N.* i. p. 382 (1766); *Merr. Beitr. Nat. Amph.* i. p. 27, pl. ix. (1790); *Daud. Rept.* vi. p. 359 (1803); *Schleg. Phys. Serp.* ii. p. 155, pl. vi. figs. 7 & 8 (1837); *Smith, Ill. Zool. S. Afr., Rept.* pls. xiv.-xvii. (1842).

*Duberria cana*, *Fitzing. N. Class. Rept.* p. 55 (1826).

*Coronella cana*, *Dum. & Bibr.* vii. p. 613 (1854); *Günth. Cat.* p. 40 (1858); *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 253.

*Pseudaspis cana*, *Cope, Proc. Ac. Philad.* 1864, p. 168.

*Cadmus cuneiformis*, *Theob. Cat. Rept. As. Soc. Mus.* 1868, p. 58, and *Cat. Rept. Brit. Ind.* p. 163 (1876).

*Coronella phocarum*, *Günth. Proc. Zool. Soc.* 1872, p. 836.

Snout rather prominent, with angular canthus rostralis and vertical slightly concave lores; rostral considerably deeper than broad, the portion visible from above about half as long as its distance from the frontal; suture between the internasals as long as or longer than that between the præfrontals; frontal as long as or longer than its distance from the end of the snout, as long as or longer than the parietals; loreal longer than deep; one præocular; two or three postoculars, and a subocular separating the fifth labial from the eye; temporals 2+3 or 3+4; seven upper labials, fourth entering the eye; five or six lower labials in contact with the anterior chin-shields, which are longer than the posterior. Scales in 27 to 31 rows. Ventrals 175-212; anal divided; subcaudals 50-70. Young

pale brown, with dark brown white-edged spots forming four longitudinal series; sometimes a darker vertebral line; lower parts yellowish or purplish brown, uniform or spotted with black. Adult very variable in colour, brown or reddish, with more or less distinct spots, often uniform dark brown or black.

Total length 1700 millim.; tail 250.

South Africa.

#### A. Pale brown above.

- a-c.* ♀ (Sc. 29; V. 212; C. 58), Cape of Good Dr. Lee [P.].  
 hgr. (Sc. 29; V. 189; C. 50), Hope.  
 & yg. (Sc. 29; V. 183; C. 69).  
*d.* Yg. (Sc. 27; V. 205; C. 55). Cape Cook.  
*e.* ♂ (Sc. 31; V. 190; C. 70). S. Africa. Capt. H. C. St. John [P.].  
*f.* ♂ (Sc. 27; V. 187; C. 62). S. Africa. Mr. J. Abrahams [P.].  
*g.* Yg. (Sc. 29; V. 189; C. 70). S. Africa. Mr. A. Thomson [P.].  
*h.* ♂ (Sc. 29; V. 183; C. 58). S. Africa.  
*i.* Yg. (Sc. 31; V. 189; C. 63). S. Africa. (One of the types of *C. phocarum*.)

#### B. Dark brown or black.

- k.* ♂ (Sc. 27; V. 185; C. 66). Simon's Bay. H.M.S. 'Challenger.'  
*l.* Hgr. (Sc. 31; V. 199; C. 51). Cape Town. Rev. G. H. R. Fisk [P.].  
*m.* ♀ (Sc. 31; V. 209; C. 54). Robben Isl. Rev. G. H. R. Fisk }  
 [P.]. }  
*n-o.* ♂ (Sc. 31, 31; V. 175, 184; S. Africa. College of Sur- }  
 C. 65, 61). } geons. }  
*p.* ♂ (Sc. 27; V. 184; C. 70). S. Africa. (Types of *C. phocarum*.)  
 Haslar Collection.

#### C. Osteological specimens.

- q.* Ad., skel. S. Africa.  
*r.* Skull. S. Africa.

### 53. ZAOCYS.

Coryphodon, part., *Günth. Cat. Col. Sn.* p. 107 (1858); *Jan, Elenco sist. Ofid.* p. 63 (1863).

Zaocys, *Cope, Proc. Ac. Philad.* 1860, p. 563; *Günth. Rept. Brit. Ind.* p. 255 (1864); *Bouleng. Faun. Ind., Rept.* p. 329 (1890).

Herpetodryas, part., *Jan, l. c.* p. 80.

Zapyrus, *Günth. Rept. Brit. Ind.* p. 256.

Maxillary teeth 20 to 33, increasing in size posteriorly; mandibular teeth subequal. Head elongate, distinct from neck; eye large, with round pupil; a subocular beneath the præocular. Body elongate, a little compressed; scales smooth or keeled, with apical pits, in 14, 16, or 18 rows; ventrals rounded. Tail long; subcaudals in two rows.

South-eastern Asia.

*Synopsis of the Species.*

I. A single loreal; eight upper labials, fourth and fifth entering the eye.

A. Scales in 16 rows.

Two or four rows of scales keeled; subcaudals 108-116 ..... 1. *dhumnades*, p. 375.  
 Four or six rows of scales keeled; subcaudals 123-137 ..... [p. 376.  
 2. *nigromarginatus*,

B. Scales in 14 rows, all smooth ..... 3. *luzonensis*, p. 377.

II. Two or three loreals; scales in 16 or 18 rows.

Two median rows of scales keeled; subcaudals 110-118; fifth and sixth labials entering the eye ..... 4. *carinatus*, p. 377.  
 Scales all smooth; subcaudals 163-165; fifth and sixth labials entering the eye.. 5. *fuscus*, p. 378.  
 Scales all smooth; subcaudals 123; fourth or fifth labial entering the eye ..... [p. 378.  
 6. *tenasserimensis*,

1. *Zaocys dhumnades*. (PLATE XXVI. fig. 1.)

*Coluber dhumnades*, Cantor, *Ann. & Mag. N. H.* ix. 1842, p. 483, and *Cat. Mal. Rept.* p. 74 (1847).

*Ablabes vittatus*, Dum. & Bibr. vii. p. 326 (1854); *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 281.

*Coryphodon carinatus*, part., Günth. *Cat.* p. 112 (1858).

*Zaocys dhumnades*, Cope, *Proc. Ac. Philad.* 1860, p. 563; Günth. *Rept. Brit. Ind.* p. 256, pl. xxii. fig. A (1864).

Rostral broader than deep, visible from above; internasals shorter than the præfrontals; frontals once and one fourth to once and a half as long as broad, as long as or a little shorter than its distance from the end of the snout, a little shorter than the parietals; loreal longer than deep; one præocular, with a subocular below it; two postoculars; temporals 2+2 or 2+1; eight upper labials, fourth and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 16 rows, the two median strongly keeled; a second dorsal pair may be feebly keeled. Ventrals 187-194; anal divided; subcaudals 108-116. Anterior half of body olive above, with black edges to the scales and a yellow or orange, black-edged vertebral stripe; upper lip and belly yellow, the olive of the upper parts extending down to the ends of the ventrals; on the posterior part of the body the upper surfaces turn to black and the lower to dark olive or grey.

Total length 1950 millim.; tail 530.

Southern China.



<i>a.</i> ♂ (V. 191; C. ?).	Chusan.	Dr. Cantor. (Type.)
<i>b.</i> ♂ (V. 189; C. ?).	Chusan.	
<i>c-e.</i> ♂ (V. 194, 189, 194; C. 115, 116, 115).	Mountains north of Kiukiang.	A. E. Pratt, Esq. [C.].
<i>f.</i> ♂ (V. 187; C. 112).	[Deccan.]	Col. Sykes [P.].

## 2. *Zaocys nigromarginatus*.

*Coluber nigromarginatus*, *Blyth, Journ. As. Soc. Beng.* xxiii. 1854, p. 290.

*Coryphodon carinatus*, part., *Günth. Cat.* p. 112 (1858), and *Proc. Zool. Soc.* 1860, p. 163.

*Zaocys nigromarginatus*, *Günth. Rept. Brit. Ind.* p. 257, pl. xxii. fig. B (1864); *Theob. Cat. Rept. Brit. Ind.* p. 172 (1876); *Bouleng. Faun. Ind., Rept.* p. 329 (1890).

*Coryphodon dhumnades* (*non Cant.*), *Jan, Icon. Gén.* 24, pl. iv. fig. 1 (1867).

Rostral broader than deep, visible from above; internasals shorter than the præfrontals; frontal once and one fourth to once and a half as long as broad, as long as or a little shorter than its distance from the end of the snout or than the parietals; loreal longer than deep; one præocular, with a subocular below it; two postoculars; temporals 2+2 (rarely 1+2); eight upper labials, fourth and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior. Scales in 16 rows, the four or six median keeled. Ventrals 190-205; anal divided; subcaudals 123-137. Green above, scales black-edged, yellowish green below; two broad deep black bands along each side of the tail, advancing forwards on the trunk to its middle third in adult specimens, and nearly to the head in young ones; the two upper bands separated from each other by the joining halves of the two vertebral series of scales.

Total length 2100 millim.; tail 600.

Himalayas (to 7100 feet), Khasi Hills, and Kakhyen Hills, Upper Burma.

<i>a, b.</i> ♂ (V. 193; C. 130) & yg. (V. 194; C. 130).	Nepal.	B. H. Hodgson, Esq. [P.].
<i>c.</i> ♂ (V. 194; C. 130).	Sikkim.	Messrs. v. Schlagintweit [C.].
<i>d-e.</i> ♂ (V. 190; C. 132) & ♀ (V. 197; C. ?).	Sikkim.	Sir J. Hooker [P.].
<i>f.</i> ♀ (V. 194; C. 124).	Darjeeling.	W. T. Blanford, Esq. [P.].
<i>g-h.</i> ♀ (V. 205; C. 131) & hgr. (V. 195; C. 130).	Khasi Hills.	Sir J. Hooker [P.].
<i>i, k-m, n.</i> ♂ (V. 205, 193; C. 131, 130), ♀ (V. 196, 197; C. 126, 123), & yg. (V. 193; C. 137).	— ?	East India Museum.
<i>o.</i> ♀ (V. 201; C. 134).	— ? [Afghanistan.]	

3. *Zaocys luzonensis*. (PLATE XXVI. fig. 2.)

*Zaocys luzonensis*, *Günth. Proc. Zool. Soc.* 1873, p. 169.

Rostral as deep as broad, visible from above; internasals shorter than the præfrontals; frontal once and one third as long as broad, as long as its distance from the end of the snout, a little shorter than the parietals; loreal at least twice as long as deep; one præocular, with a subocular below it; two postoculars; temporals 2+2; eight upper labials, fourth and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are much shorter than the posterior. Scales smooth, in 14 rows. Ventrals 205; anal divided; subcaudals 119. Pale olive-brown above, the scales edged with black; lower parts yellow, turning to dark olive posteriorly.

Total length 2500 millim.; tail 650.

Philippine Islands.

a. ♂ (V. 205; C. 119). Luzon. Dr. A. B. Meyer [C.]. (Type.)

4. *Zaocys carinatus*. (PLATE XXVII. fig. 1.)

*Coryphodon carinatus*, part., *Günth. Cat.* p. 112 (1858).

*Zaocys carinatus*, *Günth. Rept. Brit. Ind.* p. 256 (1864).

*Ptyas korros*, part., *Blanf. Proc. Zool. Soc.* 1831, p. 221.

Rostral broader than deep, visible from above; internasals shorter than the præfrontals; frontal a little longer than broad, as long as its distance from the rostral, a little shorter than the parietals; two or three loreals; one præocular, with a subocular below it; two postoculars; temporals 2+2; nine upper labials, fifth and sixth entering the eye; five lower labials in contact with the anterior chin-shields, which are much shorter than the posterior. Scales in 16 or 18 rows, two or four middle rows keeled. Ventrals 208-215; anal divided; subcaudals 110-118. Brownish olive or blackish anteriorly, with yellowish spots or irregular cross bands, yellowish or pale brown posteriorly with a large deep-black network; lower parts yellowish anteriorly, black and yellow posteriorly.

Total length 3000 millim.; tail 750.

Borneo, Sumatra, Malay Peninsula.

- |                        |                                 |                                 |
|------------------------|---------------------------------|---------------------------------|
| a. ♂ (V. 209; C. ?).   | Borneo.                         | Sir E. Belcher [P.],<br>(Type.) |
| b. ♂ (V. 215; C. 118). | District of Deli, Su-<br>matra. | Mr. Iversen [C.].               |
| c. ♂ (V. 208; C. 110). | Singapore.                      | Dr. Dennys [P.].                |
| d. ♂ (V. 208; C. 118). | Perak.                          | Dr. J. Anderson<br>[P.].        |

5. *Zaocys fuscus*. (PLATE XXVII. fig. 2.)

*Coryphodon fuscus*, *Günth. Cat.* p. 112 (1858).

? *Herpetodryas horneri*, *Jan, Elenco*, p. 80 (1863).

*Zaocys fuscus*, *Günth. Rept. Brit. Ind.* p. 256 (1864).

Rostral a little broader than deep, visible from above; internasals shorter than the præfrontals; frontal a little longer than broad, as long as its distance from the rostral or the end of the snout, a little shorter than the parietals; three loreals; one præocular, with one or two small suboculars below it; two postoculars; temporals 2+2; nine upper labials, fifth and sixth entering the eye; five lower labials in contact with the anterior chin-shields, which are much shorter than the posterior. Scales smooth, in 16 rows. Ventrals 189-198; anal divided; subcaudals 163-165. Olive above, yellowish inferiorly; a black lateral band along the posterior part of the body and along the tail, extending to the outer ends of the ventral and subcaudal shields.

Total length 2900 millim.; tail 1000.

Borneo and Sumatra.

- |                                   |         |                      |            |
|-----------------------------------|---------|----------------------|------------|
| a. ♂ (V. 195; C. 163).            | Borneo. | Sir E. Belcher [P.]. | } (Types.) |
| b. Hgr. ♂ (V. 192; C. 165).       | Borneo. |                      |            |
| c, d. ♂ (V. 189, 198; C. 164, ?). | Nias.   | Hr. Sundermann [C.]. |            |
| e. ♂ (V. 195; C. ?).              | —?      | Dr. Bleeker.         |            |

6. *Zaocys tenasserimensis*.

*Zaocys tenasserimensis*, *W. L. Sclater, Journ. As. Soc. Beng.* lx. 1891, p. 238, pl. vi. fig. 3.

Rostral as broad as deep, just visible from above; internasals shorter than the præfrontals; frontal longer than broad, longer than its distance from the end of the snout, shorter than the parietals; three loreals; one præocular, with a subocular below it; two postoculars; a single pair of long, superposed temporals; seven or eight upper labials, fourth or fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are equal to the posterior. Scales smooth, in 16 rows. Ventrals 201; anal divided; subcaudals 123. Black above, greenish olive on the head; anteriorly with traces of a white vertebral line; in the middle part of the body a series of ill-defined white transverse bands bordered with black posteriorly; on the hinder part of the body the bands are gradually transformed into seven longitudinal series of white spots separated by a black network; below yellowish, the outer edges of the ventrals dusky, tail with a median dusky streak.

Tenasserim.

## 54. ZAMENIS.

- Hæmorrhoids, *Boie, Isis*, 1826, p. 982, and 1827, p. 538 (nom. nud.); *Eichw. Faun. Casp.-Cauc.* p. 113 (1841).  
 Tyria, part., *Fitzing. N. Class. Rept.* p. 29 (1826).  
 Zamenis, part., *Wagl. Syst. Amph.* p. 188 (1830).  
 Periops, *Wagl. l. c.* p. 189; *Dum. & Bibr. Erp. Gén. vii.* p. 674 (1854); *Jan, Elenco sist. Ofid.* p. 59 (1863).  
 Coluber, part., *Schleg. Phys. Serp.* ii. p. 125 (1837).  
 P'sanimophis, part., *Schleg. l. c.* p. 201.  
 Zamenis, *Dum. & Bibr. t. c.* p. 683; *Günth. Cat. Col. Sn.* p. 101 (1858); *Jan, l. c.* p. 65; *Günth. Rept. Brit. Ind.* p. 252 (1864); *Bocourt, Miss. Sc. Mex., Rept.* p. 603 (1888); *Bouleng. Faun. Ind., Rept.* p. 323 (1890).  
 Bascanion, *Baird & Gir. Cat. N. Am. Rept.* p. 93 (1853); *Bocourt, op. cit.* p. 697 (1890); *Cope, Proc. U.S. Nat. Mus.* xiv. 1892, p. 621.  
 Masticophis, *Baird & Gir. l. c.* p. 98; *Jan, l. c.* p. 64.  
 Salvadora, *Baird & Gir. l. c.* p. 104; *Jan, l. c.* p. 58; *Bocourt, l. c.* p. 660 (1888); *Cope, l. c.* p. 618.  
 Coryphodon, part., *Dum. & Bibr. t. c.* p. 180; *Günth. Cat.* p. 107; *Jan, l. c.* p. 63.  
 Herpetodryas, part., *Dum. & Bibr. t. c.* p. 203; *Günth. Cat.* p. 113; *Jan, l. c.* p. 80.  
 Leptophis, part., *Dum. & Bibr. t. c.* p. 528.  
 Ptyas, *Cope, Proc. Ac. Philad.* 1860, p. 563; *Günth. Rept. Brit. Ind.* p. 248.  
 Phimothyra, *Cope, l. c.* p. 566.  
 Platyceps, *Blyth, Journ. As. Soc. Beng.* xxix. 1860, p. 114.  
 Tyria, *Cope, Proc. Ac. Philad.* 1862, p. 338.  
 Megablabe, *Günth. Ann. & Mag. N. H.* (3) xv. 1865, p. 92.  
 Spalerosophis, *Jan, in De Filippi, Viagg. Pers.* p. 356 (1865).  
 Chilolepis, *Cope, Proc. Am. Philos. Soc.* xxiii. 1886, p. 491.  
 Drymobius, part., *Bocourt, op. cit.* p. 715 (1890).

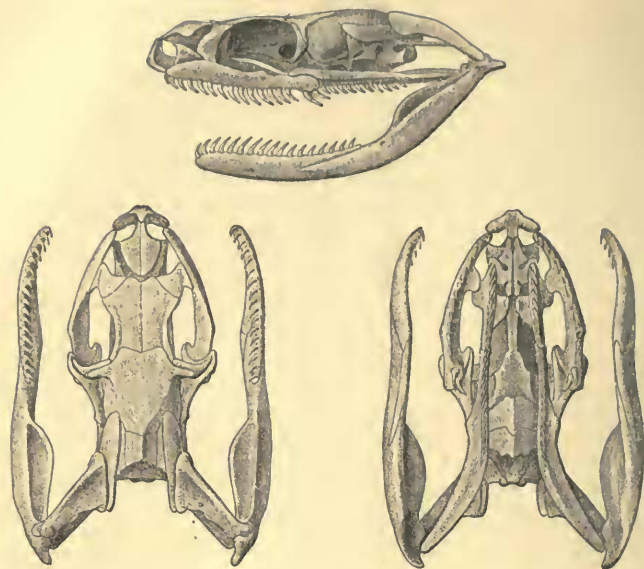
Maxillary teeth 12 to 20, increasing in size posteriorly, forming a continuous series or the two last separated from the others by a very narrow interspace; mandibular teeth subequal, or anterior slightly enlarged. Head elongate, distinct from neck; eye moderate or large, with round pupil; usually one or more suboculars. Body elongate, cylindrical; scales smooth or feebly keeled, with apical pits, in 13 to 43 rows; ventrals rounded or with an obtuse lateral keel. Tail moderate or long; subcaudals in two rows.

Europe; Asia; North Africa; Senegambia; North and Central America.

As observed by Dr. Günther in 1864 (*Rept. Brit. Ind.* p. 252), the species of this genus afford a complete transition from the "Coryphodont" dentition as exemplified by *Z. korros* or *Z. constrictor* to the somewhat ill-defined "Diacranterian" type as shown by *Z. gemoneusis*, the skull of which is here figured.



Fig. 26.

Skull of *Zamenis gemonensis*.*Synopsis of the Species.*

## I. A pair of internasals and a pair of præfrontals.

## A. Posterior chin-shields in contact anteriorly\*.

Scales in 13 rows; ventrals 194-197 . . . . 1. *dipsas*, p. 383.Scales in 15 rows; ventrals 162-177 . . . . 2. *korros*, p. 384.Scales in 17 rows; ventrals 190-208 . . . . 3. *mucosus*, p. 385.

## B. Posterior chin-shields usually separated from each other by scales.

1. Scales in 15 or 17 rows (exceptionally 19 in *Z. flagelliformis*?).

a. Portion of rostral seen from above not more than half as long as its distance from the frontal.

a. Frontal anteriorly wider than the supraocular.

\* Scales in 15 rows; fourth and fifth labials entering the eye . . . . . 4. *oaxaca*, p. 386.

\* It is necessary, for ascertaining this character, to distend the skin of the chin to make sure that small scales are not hidden in the mental groove.

## \*\* Scales in 17 rows.

† Snout moderately projecting, obtuse.

- Third and fourth (rarely fourth and fifth) labials entering the eye; ventrals 160-190; subcaudals 74-104 ..... 5. *constrictor*, p. 387.
- Fourth and fifth labials entering the eye; ventrals 184-197; subcaudals 110-128. 6. *lineatus*, p. 388.
- A single labial entering the eye; ventrals 185-202; subcaudals 111-113 ..... 7. *mentovarius*, p. 389.

†† Snout very prominent, rather pointed; ventrals 180-203; subcaudals 85-99.

13. *spinalis*, p. 394.

β. Frontal not or but slightly wider than the supraocular; ventrals 182-211.

- A subocular below the præocular; two labials entering the eye; subcaudals 80-112 ..... [p. 389].  
8. *flagelliformis*,
- A subocular below the præocular; two labials entering the eye; subcaudals 115-157 ..... 9. *terniatus*, p. 390.
- No subocular; three labials entering the eye; subcaudals 133-152 ..... [p. 392].  
10. *pulcherrimus*,

b. Portion of rostral visible from above as long as or a little shorter than its distance from the frontal; ventrals 175-206.

- Three labials entering the eye; subcaudals 127-135 ..... 11. *mexicanus*, p. 392.
- One or two labials entering the eye; subcaudals 75-108 ..... 12. *grahami*, p. 393.

2. Scales in 19 rows (rarely 17 in *Z. gemonensis*).

a. Frontal not or but slightly wider than the supraocular, more than once and a half as long as broad.

- Ventrals rather indistinctly angulate laterally; scales with two apical pits ..... 14. *gemonensis*, p. 395.
- Ventrals very distinctly angulate laterally; scales with a single apical pit ..... 15. *dahlui*, p. 397.

b. Frontal anteriorly considerably wider than the supraocular.

a. Nine upper labials, two of which enter the eye.

- Ventrals 214-262; subcaudals 113-145.. 16. *rhodorhachis*,  
[p. 398].

- Ventrals 199-211; subcaudals 82-119 .. 17. *ventrimaculatus*,  
[p. 399].

β. Nine upper labials; a subocular separates the eye from the sixth labial ..... 18. *kurelinii*, p. 401.

- γ. Eight upper labials . . . . . 19. *elegantissimus*,  
[p. 402.]
3. Scales in 21 or 23 rows; two labials enter the eye.  
a. One præocular (rarely divided), with a subocular below it;  
scales smooth.
- Nine upper labials; subcaudals not more  
than 100 . . . . . 20. *florulentus*, p. 402.
- Nine upper labials; subcaudals more than  
100 . . . . . 21. *gracilis*, p. 404.
- Eight upper labials; subcaudals less than  
100 . . . . . 22. *fasciolatus*, p. 404.
- b. Two præoculars in addition to the subocular; scales with  
an obtuse or faint keel . . . . . 23. *ravergieri*, p. 405.
4. Scales in 23 or 25 rows, usually a single labial enters the  
eye.  
a. Two præoculars in addition to the subocular.
- Scales obtusely or faintly keeled; ventrals  
197-216; subcaudals 79-101 . . . . . 24. *nummifer*, p. 407.
- Scales perfectly smooth; ventrals 219-228;  
subcaudals 107-119 . . . . . 25. *socotrae*, p. 408.
- b. One præocular, with a subocular below it; ventrals 214-  
232; subcaudals 87-104 . . . . . 26. *algirus*, p. 408.
5. Scales in 25 to 29 rows; eye usually separated from the  
labials by suboculars . . . . . 27. *hippocrepis*, p. 409.
6. Scales in 31 rows; two labials entering the eye.  
28. *dorri*, p. 410.
- II. Præfrontals broken up into three or more shields; eye separated  
from the labials by suboculars; anal entire.
- A. Scales in 25 to 33 rows; 10 to 13 upper labials.
- Rostral as deep as broad or a little broader  
than deep . . . . . 29. *diadema*, p. 411.
- Rostral much deeper than broad, wedged in  
far between the internasals . . . . . 30. *arenarius*, p. 413.
- B. Scales in 41 to 43 rows; 14 or 15 upper labials.  
31. *microlepis*, p. 413.

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As has been done for the genus *Tropidonotus*, a table is appended showing the numbers of scales and shields in the different species, with the object of facilitating the identification of specimens:—

## I. Old-World species.

	Sc.	V.	A.	C.	Lab. entering eye.
<i>dipsas</i> .....	13	194-197	1	102-130	4th, 5th.
<i>korros</i> .....	15	162-177	2	122-145	4th, 5th.
<i>mucosus</i> .....	17	187-208	2	95-140	4th, 5th.
<i>spinalis</i> .....	17	180-203	2	85-99	4th, 5th, or 5th, 6th.
<i>gemonensis</i> .....	17-19	190-250	2	87-130	4th, 5th.
<i>dahlii</i> .....	19	205-218	2	98-132	4th, 5th, or 5th, 6th.
<i>rhodorhachis</i> .....	19	214-262	2	113-154	5th, 6th.
<i>ventrimaculatus</i> .....	19	194-211	2	82-119	5th, 6th.
<i>kurelinii</i> .....	19	193-212	2	85-110	5th.
<i>elegantissimus</i> .....	19	197-200	2	79-83	5th, or 4th, 5th.
<i>florulentus</i> .....	21-23	201-228	2	82-100	5th, 6th.
<i>gracilis</i> .....	21	206-228	2	118-127	5th, 6th.
<i>fasciolatus</i> .....	21-23	197-225	2	73-92	4th, 5th.
<i>ravergieri</i> .....	21-23	190-222	2	75-101	5th, 6th.
<i>nummifer</i> .....	23-25	197-216	1-2	79-101	5th, or 5th, 6th.
<i>socotra</i> .....	23	219-228	2	107-119	5th.
<i>algirus</i> .....	23-25	214-232	1-2	87-104	5th, or 6th, or 0.
<i>hippocrepis</i> .....	25-29	222-258	1-2	77-107	5th, or 6th, or 0.
<i>dorri</i> .....	31	245-254	2	84	4th, 5th.
<i>diadema</i> .....	25-33	210-278	1	65-110	0.
<i>arenarius</i> .....	25-27	227	1	80	0.
<i>microlepis</i> .....	41-43	263	1	100	0.

## II. American species.

	Sc.	V.	A.	C.	Lab. entering eye.
<i>oaxaco</i> .....	15	154-160	2	87	4th, 5th.
<i>constrictor</i> .....	17	160-190	2	74-104	3rd, 4th, or 4th, 5th.
<i>lineatus</i> .....	17	184-197	2	110-128	4th, 5th.
<i>mentovarius</i> .....	17	185-202	2	111-113	4th or 5th.
<i>flagelliformis</i> .....	17	182-211	2	80-112	4th, 5th.
<i>teniatus</i> .....	15-17	196-209	1-2	115-157	4th, 5th.
<i>pulcherrimus</i> .....	17	191-205	2	133-152	4th, 5th, 6th.
<i>mexicanus</i> .....	17	184-190	2	127-135	4th, 5th, 6th.
<i>grahami</i> .....	17	175-206	2	75-108	4th, 5th, or 5th, 6th.

1. *Zamenis dipsas*.

*Herpetodryas dipsas*, Schleg. *Phys. Serp.* ii. p. 197 (1837).

*Leptophis olivaceus*, Dum. & Bibr. vii. p. 547 (1854).

*Megablades olivaceus*, Günth. *Ann. & Mag. N. H.* (3) xv. 1865, p. 92.

Snout scarcely projecting, obtuse; eye very large. Rostral broader than deep, just visible from above; internasals shorter than the prefrontals; frontal once and a half as long as broad, as long as its distance from the end of the snout, a little shorter than the parietals; loreal a little longer than deep; a divided præocular, not touching the frontal; a small subocular below the præocular; two postoculars; temporals 2+2; eight upper labials, fourth and fifth entering the eye; four or five lower labials in contact with the anterior chin-



shields; posterior chin-shields longer than the anterior, and in contact anteriorly. Scales smooth, in 13 rows. Ventrals 194-197; anal entire; subcaudals 102-130. Blackish brown above, the sides yellow on the anterior portion of the body; upper lip yellow; lower parts yellow anteriorly, with a lateral series of blackish-brown spots, turning to brown towards the middle, the posterior portion of the body and the tail being of a uniform blackish brown above and below.

Total length 900 millim.; tail 500.

Celebes.

a. ♂ (V. 197; C. 102).

Manado.

Dr. Bleeker. (Type of *Megablabe olivaceus*.)

## 2. *Zamenis korros*.

*Coluber korros*, *Schleg. Phys. Serp.* ii. p. 139 (1837), and *Abbild.* p. 99, pls. xxvii. & xxviii. figs. 1-6 (1840); *Cantor, Cat. Mal. Rept.* p. 74 (1847).

*Coryphodon korros*, *Dum. & Bibr.* vii. p. 186 (1854); *Günth. Cat.* p. 110 (1858); *Jan, Icon. Gén.* 24, pl. iv. fig. 2 (1867).

*Ptyas korros*, *Cone, Proc. Ac. Philad.* 1860, p. 563; *Günth. Rept. Brit. Ind.* p. 169 (1876); *Anders. An. Zool. Res. Yunnan*, p. 816 (1879).

*Zamenis korros*, *Bouleng. Faun. Ind., Rept.* p. 324 (1890).

Snout slightly projecting, obtuse; eye very large. Rostral a little broader than deep, visible from above; internasals shorter than the prefrontals; frontal once and a half to once and two thirds as long as broad, as long as its distance from the end of the snout, or a little longer, and as long as the parietals; usually two or three loreals; one large præocular, usually not touching the frontal, with a small subocular below it; two postoculars; temporals 2+2; eight upper labials, fourth and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior; latter in contact anteriorly. Scales smooth, or feebly keeled on the posterior part of the back in the adult, in 15 rows. Ventrals 162-177; anal divided; subcaudals 122-145. Brownish or olive above, the scales on the posterior part of the body and on the tail edged with black; lower surfaces uniform yellow; young with transverse series of roundish pearl-coloured spots, forming cross bands.

Total length 1500 millim.; tail 600.

Sikkim Himalayas, Assam, Burma, Western Yunnan, Southern China, Siam, Malay Peninsula, Sumatra and Java.

a. ♂ (V. 166; C. 122).	Kiu Kiang.	A. E. Pratt, Esq. [C.].
b, c. ♀ (V. 167; C. ?) & hgr. (V. 166; C. ?).	Hong Kong.	J. C. Bowring, Esq. [P.].
d. ♂ (V. 164; C. ?).	Hoi-How, Hainan.	J. Neumann, Esq. [P.].
e. ♀ (V. 176; C. 136).	India.	Capt. Stafford [P.].
f. ♂ (V. 176; C. ?).	Siam.	M. Mouhot [C.].
g. Hgr. (V. 169; C. 139).	Mergui.	Prof. Oldham [P.].
h. Hgr. (V. 172; C. 130).	Pinang.	Dr. Cantor.
i. ♂ (V. 177; C. 135).	Pinang.	Gen. Hardwicke [P.].

k. ♂ (V. 168; C. ?).	Singapore.	Dr. Dennys [P.].
l-m. ♂ (V. 166; C. ?) & hgr. (V. 170; C. 134).	Java.	G. Lyon, Esq. [P.].
n. Yg. (V. 162; C. 140).	Malay Archipelago.	Dr. Bleeker.
o, p. Skulls.	E. Indies.	

3. *Zamenis mucosus*.

- Russell, Ind. Serp.* i. pl. xxxiv. (1796), and ii. pl. xxiii. fig. 2 (1801).  
*Coluber mucosus, Linn. S. N.* i. p. 388 (1766); *Daud. Rept.* vi. p. 255 (1803).  
*Natrix mucosa, Laur. Syn. Rept.* p. 77 (1768).  
*Coluber blumenbachii, Merr. Tent.* p. 119 (1820); *Schleg. Phys. Serp.* ii. p. 137, pl. v. figs. 7 & 8 (1837).  
 — *dhumna, Cantor, Proc. Zool. Soc.* 1839, p. 51.  
*Coryphodon blumenbachii, Dum. & Bibr.* vii. p. 184 (1854); *Günth. Cat.* p. 111 (1858); *Jan, Icon. Gén.* 24, pl. iii. figs. 2-4 (1867).  
*Leptophis trifrenatus, Hallow. Proc. Ac. Philad.* 1860, p. 503.  
*Ptyas mucosus, Cope, Proc. Ac. Philad.* 1860, p. 563; *Günth. Rept. Brit. Ind.* p. 249 (1864); *Stoliczka, Journ. As. Soc. Beng.* xxxix. 1870, p. 185; *Blanf. t. c.* p. 372; *Theob. Cat. Rept. Brit. Ind.* p. 168 (1876); *Anders. An. Zool. Res. Yunnan*, p. 815 (1879); *Boettg. Zool. Jahrb.* iii. 1888, p. 931.  
*Zamenis mucosus, Bouleng. Faun. Ind., Rept.* p. 324 (1890).

Snout slightly projecting, obtuse; eye very large. Rostral a little broader than deep, visible from above; internasals shorter than the præfrontals; frontal once and a quarter to once and a half as long as broad, as long as its distance from the end of the snout, as long as the parietals or slightly shorter; usually three loreals; one large præocular, not in contact with the frontal, with a small subocular below it; two postoculars; temporals 2+2; eight upper labials, fourth and fifth entering the eye; five lower labials in contact with the anterior chin-shields, which are shorter than the posterior; latter in contact anteriorly. Scales more or less strongly keeled on the posterior part of the back, in 17 rows. Ventrals 187-208; anal divided; subcaudals 95-140. Brown above, frequently with more or less distinct black cross bands on the posterior part of the body and on the tail; young usually with light cross bands on the front half of the body. Lower surfaces yellowish; the posterior ventral and the caudal shields may be edged with black.

Total length 2100 millim.; tail 500.

Transcaspia, Afghanistan, India and Ceylon, Burma, Southern China, Siam, Malay Peninsula, Java.

a. ♂ (V. 188; C. 112).	Kowloon, Hong Kong.	H.M.S. 'Challenger.'
b-c. ♂ (V. 187; C. 105) & ♀ (V. 201; C. 100).	Formosa.	R. Swinhoe, Esq. [C.].
d-g. Hgr. (V. 195, 201; C. 95, 103) & yg. (V. 192, 194; C. 98, 105).	Cashmere.	T. C. Jerdon, Esq. [P.].

h, i-k, l-m. ♂ (V. 196, 202; C. 116, 122) & yg. (V. 197, 195, 203; C. 110, 117, 102).	Nepal.	B. H. Hodgson, Esq. [P.].
n. ♂ (V. 193; C. 110).	Sikkim.	Messrs. v. Schlagintweit [C.].
o. Yg. (V. 192; C. ?).	Bengal.	W. Masters, Esq. [P.].
p. Hgr. (V. 203; C. 135).	Calcutta.	Messrs. v. Schlagintweit [C.].
q. ♂ (V. 200; C. 102).	Calcutta.	Zoological Society.
r. ♂ (V. 195; C. 128).	Deccan.	Col. Sykes [P.].
s-u. Yg. (V. 204, 198, 204; C. 130, 125, 116).	Bombay.	Dr. Leith [P.].
v, w-x. ♂ (V. 197; C. 128) & ♀ (V. 199, 193; C. 127, 133).	Madras.	T. C. Jerdon, Esq. [P.].
y. Yg. (V. 198; C. 135).	Anamallays.	Col. Beddome [C.].
z. Yg. (V. 197; C. 140).	Ceylon.	R. Templeton, Esq. [P.].
α, β. Yg. (V. 203, 198; C. 133, 137).	Ceylon.	
γ. Yg. (V. 194; C. 112).	Toungyi, Shan States, 5000 feet.	Lieut. Blakeway [C.].
δ. Hgr. (V. 194; C. 118).	Siam.	M. Mouhot [C.].
ε. ♂ (V. 192; C. 116).	Singapore.	Dr. Dennys [P.].

#### 4. *Zamenis oaxacæ*.

*Coryphodon testaceus*, part., *Günth. Cat.* p. 108 (1858).

— *oaxaca*, *Jan, Elenco*, p. 63 (1863).

*Bascanion oaxaca*, *Bocourt, Miss. Sc. Mex., Rept.* p. 701, pl. xlviii. fig. 2 (1890).

Snout moderately prominent. Rostral a little broader than deep, the portion visible from above not quite half as long as its distance from the frontal; internasals shorter than the præfrontals; frontal once and a half to once and two thirds as long as broad; broader than the supraocular, longer than its distance from the end of the snout, as long as the parietals; loreal longer than deep; one præocular, with a small subocular below it; two postoculars; temporals 2+2; eight upper labials, fourth and fifth entering the eye; four lower labials in contact with the anterior chin-shields; posterior chin-shields a little shorter than the anterior, and separated from each other by scales. Scales smooth, in 15 rows. Ventrals not distinctly angulate, 154-160; anal divided; subcaudals 87. Olive-brown above, with small black spots; lower half of upper labials yellow; belly yellow, olive on the sides, with a few small olive spots.

Total length 580 millim.

Mexico.

a. Hgr. ♀ (V. 160; C. ?). Mexico. Mr. Hugo Finck [C.].

5. *Zamenis constrictor*.

- Coluber constrictor*, *Linn. S. N.* i. p. 385 (1766); *Cutesby, Nat. Hist. Carol.* ii. pl. xlvi. (1771); *Daud. Rept.* vi. p. 402 (1803); *Harl. Journ. Ac. Philad.* v. 1827, p. 348, and *Med. Phys. Res.* p. 112 (1835); *Schleg. Phys. Serp.* ii. p. 133 (1837); *Storer, Rep. Fish. & Rept. Mass.* p. 225 (1839); *Holbr. N. Am. Herp.* iii. p. 55, pl. xi. (1842); *De Kay, Faun. N. York, Rept.* p. 35, pl. x. fig. 20 (1842); *Garm. N. Am. Rept.* p. 41, pl. iv. fig. 3 (1883); *H. Garm. Bull. Illin. Lab.* iii. 1892, p. 285.
- *flaviventris*, *Say, in Long's Exped. Rocky Mount.* ii. p. 185 (1823); *Harl. U. C.*; *Garm. Bull. Essex Inst.* xxiv. 1892, p. 107.
- *mormon*, *Baird & Gir. in Stansbury's Exped. Great Salt Lake*, p. 351 (1852).
- Bascanion constrictor*, *Baird & Gir. Cat. N. Am. Rept.* p. 93 (1853); *Bocourt, Miss. Sc. Mex., Rept.* pl. xlvi. fig. 5 (1890); *Cope, Proc. U. S. Nat. Mus.* xiv. 1892, p. 623.
- *fremontii*, *Baird & Gir. l. c.* p. 95.
- *foxii*, *Baird & Gir. l. c.* p. 96.
- *flaviventris*, *Baird & Gir. l. c.* p. 96; *Bocourt, Miss. Sc. Mex., Rept.* p. 697, pl. xlvi. fig. 3 (1890).
- *vetustus*, *Baird & Gir. l. c.* p. 97; *Gir. U. S. Explor. Exped., Herp.* p. 127, pl. viii. figs. 12-19 (1858).
- Masticophis mormon*, *Baird & Gir. l. c.* p. 101.
- Coryphodon constrictor*, *Dum. & Bibr.* vii. p. 183 (1854); *Hallow. Proc. Ac. Philad.* 1856, p. 242; *Günth. Cat.* p. 108 (1858); *Jan, Icon. Gén.* 22, pl. iii. & pl. iv. figs. 1 & 2 (1867).
- *flaviventris*, *Hallow. Proc. Ac. Philad.* 1856, p. 241.
- *testaceus*, part., *Günth. l. c.* p. 108.
- *constrictor flaviventris*, *Jan, op. cit.* 48, pl. vi. fig. 2 (1876).

Snout moderately prominent. Rostral as deep as broad or a little broader, the portion visible from above measuring one third to one half its distance from the frontal; internasals shorter than the præfrontals; frontal once and a half to once and three fourths as long as broad, anteriorly a little broader than the supraocular, as long as or a little longer than its distance from the end of the snout, nearly as long as the parietals; loreal as long as deep or a little longer; one præocular (rarely divided), with a small subocular below it; two postoculars; temporals 2+2; seven (rarely eight) upper labials, third and fourth (or fourth and fifth) entering the eye; four lower labials in contact with the anterior chin-shields; posterior chin-shields as long as or a little shorter than the anterior, and separated from each other by scales. Scales smooth, in 17 rows. Ventrals not distinctly angulate laterally, 160-190; anal divided; subcaudals 74-104. Olive to black above; young with transversely oval, dark, black-edged spots.

Total length 1580 millim.; tail 370.

North America, North Mexico.

A. Black above and below; lips and throat yellowish.

(*C. constrictor*.)

- a. ♀ (V. 175; C. 97). New Orleans.  
 b. ♀ (V. 180; C. 88). N. America.  
 c. Skull. N. America.



B. Olive or brown above, yellow or pale olive inferiorly.  
(*C. flaviventris*.)

<i>a, b-c.</i> ♀ (V. 183; C. 87) & yg. (V. 177, 179; C. 80, 93).	Bloomington, Indiana.	C. Bollman, Esq. [C.].
<i>d.</i> ♂ (V. 171; C. 80).	Kansas.	Smithsonian Inst. [P.].
<i>e.</i> ♀ (V. 178; C. 84).	Kansas.	
<i>f.</i> Yg. (V. 180; C. ?).	Delaware.	E. Doubleday, Esq. [P.].
<i>g, h.</i> ♂ (V. 160; C. ?) & ♀ (V. 165; C. 87).	Texas.	
<i>i-k.</i> ♂ (V. 170; C. 95) & ♀ (V. 178; C. ?).	British Columbia.	J. K. Lord, Esq. [P.].
<i>l.</i> ♀ (V. 173; C. 81).	Oregon.	Smithsonian Inst. [P.].
<i>m.</i> Yg. (V. 172; C. 93).	Sierra Nevada, California.	Mr. Gruber [C.].
<i>n.</i> Yg. (V. 869; C. 84).	Monterey, California.	
<i>o.</i> ♀ (V. 163; C. 82).	Camp Taylor, Marin Co., California.	Prof. C. Eigenmann [C.].
<i>p-q.</i> ♂ (V. 180; C. 104) & ♀ (V. 170; C. 84).	Mexico.	
<i>r.</i> Yg. (V. 161; C. ?).	Mexico.	Mr. H. Finck [C.].

6. *Zamenis lineatus*.

*Bascanion lineatus*, *Bocourt, Miss. Sc. Mex., Rept.* p. 700, pl. xlvi. fig. 1 (1890).

Snout moderately prominent; eye a little larger than in *Z. constrictor*. Rostral as deep as broad or a little broader, the portion visible from above measuring one third to one half its distance from the frontal; internasals shorter than the præfrontals; frontal once and two thirds to twice as long as broad, a little broader than the supraocular, as long as or a little longer than its distance from the end of the snout, nearly as long as the parietals; loreal considerably longer than deep; one præocular, with a small subocular below it; two postoculars; temporals 2+2 or 3+3; eight upper labials, fourth and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields; posterior chin-shields as long as, or a little longer than, the anterior, and separated from each other by scales. Scales smooth, in 17 rows. Ventrals obtusely angulate laterally, 184-197; anal divided; subcaudals 110-128. Pale brown or pale olive above, each scale with a small black apical spot; young with yellowish, black-edged markings on the occiput and nape; belly uniform yellow.

Total length 1850 millim.; tail 450.

Western Mexico.

<i>a-c, d.</i> ♂ (V. 188, 188; C. 115, ?), ♀ (V. 184; C. 110), & yg. (V. 184; C. 115).	Presidio, nr. Mazatlan.	Mr. A. Forrer [C.].
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- e, f-i, k-l.* ♂ (V. 192, 197; Tres Marias Islands. Mr. A. Forrer [C.].  
 C. 125, 128) & hgr. (V.  
 195, 195, 197, 195, 197;  
 C. 113, 117, 115, 113,  
 120).  
*m.* Ad. (head and neck). Guadalupe, 1500 ft. Dr. A. C. Buller [C.].  
*n.* Ad. (head and neck). Antlan, Jalisco. Dr. A. C. Buller [C.].  
*o.* ♂ (V. 187; C. 129). Amula, Guerrero. Mr. W. H. Smith [C.];  
 F. D. Godman, Esq. [P.].

### 7. *Zamenis mentovarius.*

- Coryphodon mentovarius*, *Dum. & Bibr.* vii. p. 187 (1854).  
*Bascanium suboculare*, *Cope, Proc. Ac. Philad.* 1866, p. 319.  
 ? *Spilotes corais*, var. *suborbitalis*, *Peters, Mon. Berl. Ac.* 1868,  
 p. 641.  
*Bascanium mentovarium*, *Cope, Proc. Am. Philos. Soc.* xviii. 1879,  
 p. 271; *Bocourt, Miss. Sc. Mex., Rept.* p. 699, pl. xlv. fig. 6  
 (1890).  
*Coluber constrictor*, var. *mentovarius*, *Garm. N. Am. Rept.* p. 42  
 (1883).

Snout rather prominent. Rostral broader than deep, the portion visible from above about one third as long as its distance from the frontal; internasals shorter than the præfrontals; frontal not or but slightly broader than the supraocular, once and two thirds as long as broad, longer than its distance from the end of the snout, as long as the parietals; loreal a little longer than deep; one præocular, with a subocular below it; two postoculars; temporals 2+2; seven or eight upper labials, fourth, sixth, and seventh (or fifth, seventh, and eighth) very large, fourth or fifth entering the eye; four lower labials in contact with the anterior chin-shields; posterior chin-shields longer than the anterior, and separated from each other by scales. Scales smooth, in 17 rows. Ventrals very obtusely angulate, 185-202; anal divided; subcaudals 111-113. Olive above, this colour extending to the outer ends of the ventrals; ill-defined yellowish lines on the sides; sides of head marbled olive and yellow; belly yellow, anterior ventrals with two series of olive spots.

Mexico and Guatemala.

- a.* ♂ (V. 196; C. 113). San Geronimo, Vera Paz. O. Salvin, Esq. [C.].  
*b.* ♀ (V. 185; C. ?). Rio Chisoy. O. Salvin, Esq. [C.].  
*c.* Skull. Mexico.

### 8. *Zamenis flagelliformis.*

- Natrix flagelliformis*, part., *Laur. Syn. Rept.* p. 79 (1768).  
*Coluber flagellum*, *Catesby, Nat. Hist. Carol.* ii. pl. liv. (1771).  
 — *flagelliformis*, *Daud. Rept.* vi. p. 380 (1803); *Holbr. N. Am. Herp.* p. 107, pl. xix. (1836); *Garm. N. Am. Rept.* p. 42 (1883).  
 — *testaceus*, *Say, in Long's Exped. Rocky M.* ii. p. 48 (1823);  
*Harlan, Journ. Ac. Philad.* v. 1827, p. 348, and *Med. Phys. Res.*  
 p. 113 (1835); *Holbr. N. Am. Herp.* (2nd ed.), iii. p. 63, pl. xiii.  
 (1842); *Garm. Bull. Essex Inst.* xxiv. 1892, p. 107.

- Herpetodryas psammophis*, *Schleg. Phys. Serp.* ii. p. 195 (1837), and *Abbild.* pl. xlv. figs. 21-24 (1844).  
*Psammophis flagelliformis*, *Holbr. N. Am. Herp.* (2nd ed.) iv. p. 11, pl. ii. (1842).  
 — *flavicularis*, *Hallow. Proc. Ac. Philad.* 1852, p. 178, and in *Sitgreave's Exped. Zuni & Colorado Riv.* p. 131, pl. xi. (1853).  
*Masticophis flagelliformis*, *Baird & Gir. Cat. N. Am. Rept.* p. 98 (1853); *Jan, Icon. Gén.* 20, pl. vi. (1867).  
 — *flavicularis*, *Baird & Gir. l. c.* p. 99, and in *Marcy's Explor. Red Riv.* p. 230 (1853).  
*Herpetodryas flagelliformis*, *Dum. & Bibr.* vii. p. 210 (1854); *Günth. Cat.* p. 118 (1858).  
 — *flavicularis*, part., *Günth. l. c.* p. 118.  
*Drymobius flagelliformis*, *Cope, Proc. Ac. Philad.* 1860, p. 561.  
 — *testaceus*, *Cope, l. c.*  
*Basanium flagelliforme*, *Cope, Check-List N. Am. Rept.* p. 40 (1875), and *Proc. U.S. Nat. Mus.* xiv. 1892, p. 625.  
 — *flagelliforme bicinctum*, *Yarrow, Proc. U.S. Nat. Mus.* v. 1883, p. 153.  
 ? *Basanium piceum*, *Cope, Proc. U.S. Nat. Mus.* xiv. 1892, p. 625.

Snout rather prominent. Rostral nearly as deep as broad, the portion visible from above one third or one half as long as its distance from the frontal; internasals much shorter than the præfrontals; frontal not, or but slightly, broader than the supraocular, once and a half to once and two thirds as long as broad, as long as or a little longer than its distance from the end of the snout, as long as or slightly shorter than the parietals; loreal nearly as long as deep or deeper; one præocular, with a subocular below it; two postoculars; temporals 2+2 or 2+3; eight upper labials, fourth and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields; posterior chin-shields as long as or longer than the anterior, and separated from each other by scales. Scales smooth, in 17 (or 19 ?) rows. Ventrals obtusely angulate, 182-211; anal divided; subcaudals 80-112. Yellowish brown to black above, yellow inferiorly; gular and anterior ventral regions usually with two brown or reddish stripes or series of spots.

Total length 1700 millim.; tail 380.

Southern United States and North Mexico.

- |  |                     |                             |
|--|---------------------|-----------------------------|
| a. ♂ (V. 187 C. 112).                    | Brownsville, Texas. | Smithsonian Instit.<br>[P.] |
| b-c. ♀, skin (V. 199;<br>C. 92), & head. | Duval Co., Texas.   | W. Taylor, Esq.<br>[C.]     |
| d. ♂, skin (V. 194;<br>C. 109).          | Texas.              |                             |
| e. Yg., skin (V. 182;<br>C. 107).        | Nuevo Leon.         | W. Taylor, Esq.<br>[C.]     |
| f. ♀ (V. 202; C. 110).                   | N. America.         | E. Doubleday, Esq.<br>[P.]  |

### 9. *Zamenis tæniatus*.

*Leptophis tæniata*, *Hallow. Proc. Ac. Philad.* 1852, p. 181, and in *Sitgreave's Exped. Zuni & Colorado Riv.* p. 133, pl. xii. (1853).

- Masticophis tæniatus*, *Baird & Gir. Cat. N. Am. Rept.* p. 103 (1853),  
and *Rep. Explor. Surv. R. R. x., Rept.* pl. xxiii. (1859); *Jan, Icon.*  
*Gén.* 22, pl. v. (1867).  
— *ornatus*, *Baird & Gir. l. c.* pp. 102, 159.  
— *schotti*, *Baird & Gir. l. c.* p. 160.  
*Leptophis lateralis*, *Hallow. Proc. Ac. Philad.* 1853, p. 237, and  
*Rep. Explor. Surv. R. R. x., Rept.* p. 13, pl. iv. fig. 3 (1859).  
*Herpetodryas flavigularis*, part., *Günth. Cat.* p. 118 (1858).  
*Drymobius tæniatus*, *Cope, Proc. Ac. Philad.* 1860, p. 561.  
— *aurigulus*, *Cope, Proc. Ac. Philad.* 1861, p. 301.  
*Masticophis bilineatus*, *Jan, l. c.* pl. vi. fig. 2.  
*Bascanium tæniatum*, *Cope, Check-List N. Am. Rept.* p. 40 (1875);  
*Bocourt, Miss. Sc. Mex., Rept.* p. 703, pl. xlv. fig. 5, & xlvi. fig. 8  
(1890); *Cope, Proc. U.S. Nat. Mus.* xiv. 1892, p. 629.  
— *aurigulum*, *Cope, l. c.*  
— *tæniatum laterale*, *Yarrow, Wheeler's Rep.* v. p. 543 (1875).  
*Coluber tæniatus*, *Garman, N. Am. Rept.* p. 46 (1883).  
*Bascanium laterale*, *Bocourt, l. c.* p. 706, pl. xlvi. fig. 6; *Cope, Proc.*  
*U.S. Nat. Mus.* xiv. 1892, p. 628.  
— *semilineatum*, *Cope, l. c.* p. 626.  
— *schottii*, *Cope, l. c.* p. 629.  
— *ornatum*, *Cope, l. c.* p. 629.

Snout rather prominent. Rostral nearly as deep as broad, the portion visible from above not quite half as long as its distance from the frontal; internasals as long as or shorter than the præfrontals; frontal not or but slightly broader than the supraocular, once and a half to once and three fourths as long as broad, as long as or a little longer than its distance from the end of the snout, as long as or slightly shorter than the parietals; loreal longer than deep; one præocular, with a subocular below it; two postoculars; temporals 2+2; eight upper labials, fourth and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields; posterior chin-shields longer than the anterior, and separated from each other by scales. Scales smooth, in 15 or 17 rows. Ventrals very obtusely angulate laterally, 196–209; anal entire or divided; subcaudals 115–157. Brown or blackish above, striped with lighter.

Total length 1330 millim.; tail 410.

Southern United States, west of the Mississippi; Northern Mexico.

A. Sides with black or reddish-brown and yellow longitudinal lines; belly uniform yellow. (*L. tæniata*, Hallow.)

a. ♂ (Sc. 17; V. 199; C. 132). N. America.

b. ♂ (Sc. 17; V. 196; C. 134). Presidio, Mexico. Mr. A. Forrer [C.].

B. Sides with black and yellow longitudinal lines; belly mottled with grey, with a yellowish stripe on each side. (*M. ornatus*, B. & G.)

c. Ad., skin (Sc. 15; V. 203; Coahuila, Mexico. W. Taylor, Esq. C. 141). [C.].



C. Blackish above, with a yellow stripe along each side of the back ; belly uniform yellow. (*L. lateralis*, Hall.)

d. ♂ (Sc. 17 ; V. 199 ; C. 115). Los Angeles, California. Mr. Gruber [C.]

### 10. *Zamenis pulcherrimus*.

*Masticophis pulcherrimus*, Cope, *Proc. Ac. Philad.* 1874, p. 65.

*Drymobius pulcherrimus*, Cope, *Bull. U.S. Nat. Mus.* no. 32, 1887, p. 70 ; *Bocourt, Miss. Sc. Mex., Rept.* p. 725, pl. xlix. fig. 3 (1890).

Snout moderately projecting, obtuse. Rostral as deep as broad, the portion visible from above measuring about half its distance from the frontal ; internasals a little shorter than the præfrontals ; frontal not wider than the supraocular, about twice as long as broad, longer than its distance from the end of the snout, as long as the parietals ; loreal much longer than deep (in one specimen divided into two) ; one præocular ; two postoculars ; temporals 2+2 ; nine upper labials, fourth, fifth, and sixth entering the eye ; five lower labials in contact with the anterior chin-shields ; posterior chin-shields longer than the anterior, and separated from each other by scales. Scales smooth, in 17 rows. Ventrals very obtusely angulate laterally, 191-205 ; anal divided ; subcaudals 133-152. Dark olive above, with three whitish stripes, anteriorly olive with four black stripes ; a black stripe on each side of the head, passing through the eye ; upper lip and lower parts white.

Total length 1110 millim. ; tail 370.

Tehuantepec.

- a-b. ♀ (V. 201 ; C. 133) Tehuantepec. F. Sumichrast [C.]  
& yg. (V. 191 ; C. 134).  
c-d. ♂ (V. 194 ; C. ?) & City of Tehuantepec. Dr. A. C. Buller [C.]  
♀ (V. 198 ; C. 139).

### 11. *Zamenis mexicanus*.

*Zamenis mexicanus*, Dum. & Bibr. vii. p. 695 (1854) ; *Bocourt, Miss. Sc. Mex., Rept.* p. 664, pl. xlvi. fig. 5 (1888).

*Masticophis mexicanus*, Jan, *Elenco*, p. 65 (1863), and *Icon. Gén.* 22, pl. vi. fig. 1 (1867).

*Phimothyra mexicana*, Cope, *Proc. Ac. Philad.* 1864, p. 167.

*Lytorhynchus mexicanus*, Cope, *Proc. Am. Philos. Soc.* xviii. 1879, p. 266.

*Coluber mexicanus*, Garm. *N. Am. Rept.* p. 45 (1883).

*Salvadora mexicana*, Cope, *Bull. U.S. Nat. Mus.* no. 32, 1887, p. 72, and *Proc. U.S. Nat. Mus.* xiv. 1892, p. 619.

Snout moderately projecting, obtuse. Rostral a little deeper than broad, the portion visible from above nearly as long as its distance from the frontal ; internasals a little shorter than the præfrontals ; frontal scarcely wider than the supraocular, once and two thirds as long as broad, a little longer than its distance from the end of the snout, as long as the parietals ; loreal longer than deep ; one or two præoculars ; two or three postoculars ; temporals 2+2 ; nine upper labials, fourth, fifth, and sixth entering the eye ; five lower

labials in contact with the anterior chin-shields; posterior chin-shields a little longer than the anterior, and separated from each other by scales. Scales smooth, in 17 rows. Ventrals obtusely angulate laterally, 184-190; anal divided; subcaudals 127-135. Body pale brown anteriorly with black cross bands; the greater part of the body black, with three yellowish longitudinal bands; head yellowish brown above, the shields edged with black; a black band along each side of the head, passing through the eye, connected with its fellow by a black band across the occiput; lower parts uniform yellowish.

Total length 1220 millim.; tail 400.

Mexico.

- |                              |                            |   |
|------------------------------|----------------------------|---|
| a. ♂ (V. 188; C. ?).         | Mexico.                    | M. Sallé [C.].                                    |
| b. Hgr. (V. 184;<br>C. 127). | Tierra Colorado, Guerrero. | Mr. H. H. Smith [C.];<br>F. D. Godman, Esq. [P.]. |

## 12. *Zamenis grahami*.

Salvadora *grahamiae*, *Baird & Gir. Cat. N. Am. Rept.* pp. 104, 161 (1853), and *U.S. Mex. Bound. Surv. ii., Rept.* p. 21, pl. v. fig. 2 (1859); *Jan, Icon. Gén.* 1, pl. iii. fig. 1 (1860); *Günth. Ann. & Mag. N. H.* (3) xii. 1863, p. 349; *Garm. N. Am. Rept.* p. 38 (1883); *Bocourt, Miss. Sc. Mex., Rept.* p. 661, pl. xliii. fig. 2 (1888); *Cope, Proc. U.S. Nat. Mus.* xiv. 1892, p. 619.

— *bairdi*, *Jan, l. c.* fig. 2; *Bocourt, l. c.* p. 662, fig. 3; *Dugès, La Naturelleza*, (2) i. 1888, p. 124; *Cope, l. c.*

*Phimothyras grahamiae*, *Cope, Proc. Ac. Philad.* 1861, p. 300, and 1883, p. 14.

— *bairdii*, *Cope, l. c.*

— *hexalepis*, *Cope, Proc. Ac. Philad.* 1866, p. 304.

Snout projecting, truncate. Rostral deeper than broad, its lateral borders more or less distinctly detached, the portion visible from above as long as or a little shorter than its distance from the frontal; internasals as long as the prefrontals; frontal a little broader than the supraocular, once and two thirds to twice as long as broad, longer than its distance from the end of the snout, as long as the parietals; loreal a little longer than deep, sometimes with one or two detached ones below; one preocular (rarely two), not in contact with the frontal, with a small subocular below it; two or three postoculars; temporals 1+2, 2+2, or 2+3; eight or nine upper labials, fourth and fifth or fifth and sixth\* (rarely fifth or sixth only) entering the eye; four lower labials in contact with the anterior chin-shields; posterior chin-shields as long as or shorter than the anterior, and separated from each other by scales. Scales smooth, in 17 rows. Ventrals obtusely angulate laterally, 175-206; anal divided; subcaudals 75-108. Above with two dark olive stripes, separated by an orange, yellow, or pale olive one; a narrower dark olive lateral streak; head brown above; the dark bands

\* Spec. a has eight labials on the left side and nine on the right; spec. g has nine on both sides; the other specimens in the collection have eight labials.

may extend on the sides of the head, passing through the eyes; upper lip and lower parts yellowish white (salmon-colour in life).

Total length 1140 millim.; tail 290.

California and Nevada to Western Texas and Mexico.

- |  |  |   |
|--|--|---|
| a. Hgr. (V. 195; C. 108).                      | San Bernardino,<br>California.         | Mr. A. Forrer [C.].                               |
| b-c. ♂ (V. 174; C. 95) &<br>♀ (V. 180; C. 94). | Mexico.                                | M. Sallé [C.].                                    |
| d. ♂ (V. 187; C. 103).                         | Hacienda El Flo-<br>rencio, Zacatecas. | Dr. A. C. Buller [C.].                            |
| e. Hgr. (V. 193; C. 99).                       | Hacienda del Hobo,<br>S. Mexico.       | P. Geddes, Esq. [P.].                             |
| f. Hgr. ♀ (V. 182; C. 93).                     | Amula, Guerrero,<br>8000 ft.           | Mr. H. H. Smith [C.];<br>F. D. Godman, Esq. [P.]. |
| g. ♂ (V. 192; C. 97).                          | S. Mexico.                             | F. D. Godman, Esq. [P.].                          |

### 13. *Zamenis spinalis*.

*Masticophis spinalis*, *Peters, Mon. Berl. Ac.* 1866, p. 91.

*Zamenis bocourti*, *Jan, Nouv. Arch. Mus.* ii. 1866, *Bull.* p. 6.

— *cataphronotus*, *Jan, Icon. Gén.* 23, pl. ii. fig. 2 (1867);  
*David, Journ. N. China Br. As. Soc.* vii. 1873, p. 227.

— *spinalis*, *Günth. Ann. & Mag. N. H.* (4) ix. 1872, p. 22;

*Strauch, Voy. Przewaski, Rept.* p. 46, pl. viii. (1876).

*Coluber spinalis*, *Garm. N. Am. Rept.* p. 45 (1883).

Snout very prominent, rather pointed. Rostral nearly as deep as broad, the portion visible from above measuring one third to two fifths its distance from the frontal; internasals shorter than the præfrontals; frontal broader than the supraocular, once and a half as long as broad, a little longer than its distance from the end of the snout, as long as the parietals; loreal longer than deep; one præocular, separated from or just touching the frontal, with a small subocular below it; two postoculars; temporals 1+2, 2+2, or 2+3; eight (exceptionally nine) upper labials, fourth and fifth (or fifth and sixth) entering the eye; five lower labials in contact with the anterior chin-shields; posterior chin-shields as long as or slightly longer than the anterior, and separated from each other by small scales. Scales smooth, in 17 rows. Ventrals very indistinctly angulate laterally, 180-203; anal divided; subcaudals 85-99. Pale olive above; a yellow, dark-edged vertebral streak, commencing on the frontal shield; posterior part of body with several dark longitudinal streaks; labials, præ- and postoculars yellow; lower parts yellow, with a blackish streak or series of blackish spots along the outer ends of the shields.

Total length 900 millim.; tail 240.

Mongolia, Corea, China, Siam.

- |                       |                                |   |
|-----------------------|--------------------------------|---|
| a. ♀ (V. 198; C. 85). | Corea.                         | M. J. Kalinowski [C.];<br>Branicki Museum [E.]. |
| b. ♂ (V. 189; C. 99). | Western Hills, near<br>Peking. | S. W. Bushell, Esq.<br>[P.].                    |
| e. ♂ (V. 192; C. 90). | N. China.                      | A. Adams, Esq. [C.].                            |
| d. ♂ (V. 198; C. 90). | Hoi-How, Hainan.               | J. Neumann, Esq. [P.].                          |

14. *Zamenis gemonensis*.

- Natrix gemonensis*, *Laur. Syn. Rept.* p. 76 (1768).  
*Coluber caspius*, *Iwan, Voy. en Russie*, i. p. 317, pl. xxi. (1769).  
 — *viridiflavus*, *Lacép. Serp.* p. 86 (1789); *Daud. Rept.* vi. p. 292 (1803); *Desmarest, Faun. Franç., Rept.* pl. vi. (1826); *Bonap. Icon. Faun. Ital.* (1833); *Schleg. Phys. Serp.* ii. p. 180, pl. iv. figs. 11 & 12 (1837); *De Betta, Erp. Veron.* p. 203 (1857).  
 — *vulgaris*, *Bonnat. Encycl. Méth., Ophiol.* p. 28 (1790).  
 — *communis*, *Donnd. Zool. Beitr.* iii. p. 208 (1798).  
 — *sardus*, *Suckow, Anfangsgr. d. Naturg.* iii. p. 224 (1798).  
 — *luteostriatus*, *Gmel. Der Naturf.* xxviii. 1799, p. 170, pl. iii. fig. 2.  
 — *jugularis*, *Georgi, Besch. Russ. R.* iii. p. 1882 (1800).  
 — *petalarius*, *Georgi, l. c.* p. 1883.  
 — *atrovirens*, *Shaw, Zool.* iii. p. 449 (1802); *Metaxa, Mon. Serp. Rom.* p. 36 (1823).  
 — *personatus*, *Daud. op. cit.* viii. p. 324, pl. C. fig. 2 (1803); *Lesson, Act. Soc. Linn. Bord.* xii. 1841, p. 59, pl. iii.  
 — *trabalis*, *Pall. Zoogr. Ross.-As.* iii. p. 42 (1811); *Rathke, Mém. Sav. Etr. Ac. St.-Pétersb.* iii. 1837, p. 308, pl. i. fig. 8; *Nordm. in Demidoff, Voy. Russ. MÉR.* iii. p. 344, *Rept.* pl. v. (1840).  
 — *glaucoïdes*, *Millet, Faune de Maine et Loire*, i. p. xvi (1828).  
 — *acontistes*, *Pall. l. c.* p. 43.  
 — *thermalis*, *Pall. l. c.* p. 44.  
 — *erythrogaster*, *Fisch. de Waldh. Bull. Soc. Nat. Mosc.* iv. 1832, p. 574.  
*Bothriophis erythrogaster*, *Eichw. Reise Kasp. Meer.* i. pt. 2, p. 748 (1837).  
*Coluber viridiflavus*, var. *carbonarius*, *Bonap. Mem. Acc. Tor.* (2) ii. 1839, p. 435.  
*Hæmorrhôis trabalis*, *Bonap. l. c.* p. 434; *Eichw. Faun. Casp.-Cauc.* p. 113 (1841).  
*Cœlopeltis erythrogastra*, *Eichw. l. c.* p. 121.  
*Zamenis viridiflavus*, *Dum. & Bibr.* vii. p. 686 (1854); *Viaud-Grandmarais, Et. Serp. Vend.* p. 16 (1868); *Fatio, Vert. Suisse*, iii. p. 185 (1872); *De Betta, Faun. Ital., Rett. Anf.* p. 41 (1874); *Schreib. Herp. Eur.* p. 267 (1875); *Jan, Icon. Gén.* 48, pl. vi. figs. 4-7 (1876); *Lataste, Herp. Gir.* p. 158 (1876); *Leydig, Abh. Senck. Ges.* xiii. 1883, p. 180; *R. Martin, Bull. Soc. H. N. Ouest France*, ii. 1802, p. 149.  
 — *trabalis*, *Dum. & Bibr. t. c.* p. 689; *Strauch, Schl. Russ. R.* p. 116 (1873).  
 — *atrovirens*, *Günth. Cat.* p. 101 (1858).  
*Tyria atrovirens*, *Cope, Proc. Ac. Philad.* 1862, p. 338.  
 ? *Bascanium anthicum*, *Cope, l. c.*  
*Zamenis caspicus*, *Jan, op. cit.* 23, pl. i. (1867).  
 — *gemonensis*, *Schreib. l. c.* p. 272; *Edriaga, Bull. Soc. Nat. Mosc.* lvi. 1882, p. 293; *Boettg. Sitzb. Ak. Berl.* 1888, p. 173; *Camerano, Mon. Ofid. Ital., Colubr.* p. 41 (1891).  
 — *caspius*, *Blanf. Zool. E. Pers.* p. 417 (1876).  
 — *viridiflavus*, vars. *asiana et carbonaria*, *Boettg. Ber. Senck. Ges.* 1879-80, p. 151.

Snout moderately prominent, obtuse. Rostral a little broader than deep, the portion visible from above measuring one fourth to two fifths its distance from the frontal; internasals as long as or shorter than the præfrontals; frontal not or but little broader than the supraocular, once and two thirds to twice as long as broad, as



long as or a little longer than its distance from the end of the snout, a little shorter than the parietals; loreal as long as deep or longer; one præocular (rarely two), never in contact with the frontal; a small subocular below the præocular; two (rarely three) postoculars; temporals 2+3 or 2+2; eight upper labials, fourth and fifth entering the eye; five (rarely four) lower labials in contact with the anterior chin-shields; posterior chin-shields usually longer than the anterior, and separated from each other by scales. Scales smooth, in 17 or 19 rows. Ventrals more or less indistinctly angulate laterally, 190-250; anal divided; subcaudals 87-130. Coloration very variable.

Total length 1790 millim.; tail 500.

A. Forma *TYPICA*.—Young pale olive above, the head black with yellow markings. Some adults preserve the pale coloration of the young, whilst others are dark green or black, with yellow spots or longitudinal streaks, &c.; the tail usually striated black and yellow; belly yellow or greenish white, uniform or with small dark dots. Melanotic specimens have been named *Z. carbonarius*, Bp., and *Z. sardus*, Suckow.

France, Switzerland, Italy, Malta, Illyria, Dalmatia, and Greece.

- |  |                               |                             |
|--|-------------------------------|-----------------------------|
| a. ♂ (Sc. 19; V. 205; C. 110).   | Leffond, Haute-Saône, France. | Dr. F. Mocquard [P.].       |
| b. ♂ (Sc. 19; V. 200; C. 104).   | Turin.                        | Prof. Bonelli [P.].         |
| c-d, e, f, g. ♂ (Sc. 19, 19, 17; V. 203, 218, 203, 200; C. 113, 113, 104, 110) & yg. (Sc. 19; V. 219; C. 100). | Bologna.                      | Prof. J. J. Bianconi [P.].  |
| h. Yg. (Sc. 17; V. 210; C. 98).  | Ferriere, Apennines.          | Prof. G. B. Howes [P.].     |
| i-k. Hgr. (Sc. 19; V. 217; C. 110) & yg. (Sc. 19; V. 210; C. 94).  | Rome.                         | W. C. Trevelyan, Esq. [P.]. |
| l-n, o. ♀ (Sc. 19, 19, 17; V. 215, 213, 214, 211; C. 109, 87, 113, 113).                                       | Naples.                       | Dr. F. S. Monticelli [E.].  |
| p-s. ♂ (Sc. 19; V. 196; C. 118) & ♀ (Sc. 19, 19; V. 204, 205, 206; C. 111, 98, 112).                           | Syracuse.                     | Lord Lilford [P.].          |
| t. Hgr. (Sc. 19; V. 198; C. 101).  | Malta.                        | J. Couch, Esq. [P.].        |
| u. ♂ (Sc. 19; V. 171; C. 109).   | Cerigo Island.                | Dr. Forsyth Major [P.].     |
| v. Skull.  | France.                       |                             |

B. Var. *CASPIUS*, Iwan (*trabalis*, Pall., *erythrogaster*, Fisch.).—Grey or pale olive above, each scale with a yellowish or pale brown longitudinal streak; with or without black spots; belly uniform orange or red.

S.E. Europe, Transcaucasia, N.W. Persia.

- a. ♂ (Sc. 19; V. 203; C. ?). Greece.

- b. ♀ (Sc. 19; V. 206; C. 100). Zargoom, Persia.  
 c. ♂ (Sc. 19; V. 194; C. 101). —? Chatham Museum.
- C. Var. *ASIANUS*, Boettg.—Brown or olivo above, each scale with a longitudinal light streak, and usually with large black spots relieved by yellowish shafts; belly red, spotted or dotted with black. Melanotic specimens, entirely black with the chin and throat yellow, variegated with red, are frequent.  
 Asia Minor, Rhodes, Cyprus, Syria.
- a. ♀ (Sc. 19; V. 202; C. 105). Budrum, Ruins of Halicarnassus. H.M.S. 'Supply.'  
 b-d, e-h, i-k. ♂ (Sc. 17, 19, 19, 19, 19; V. 203, 205, 204, 201, 204; C. 131, 112, 113, 111, ?) & ♀ (Sc. 19, 19, 19, 19; V. 211, 206, 207, 205; C. 105, 103, 113, ?). Cyprus. Lord Lilford [P.]  
 l. ♂ (Sc. 19; V. 202; C. ?). Palestine. Dr. C. E. Cullen [P.]  
 m. ♀ (Sc. 19; V. 212; C. 107). Merom. Canon Tristram [C.]  
 n, o-p. ♀ (Sc. 19; V. 205; C. 105) & yg. (Sc. 19, 19; V. 214, 209; C. 125, 115). Galilee. Canon Tristram [C.]  
 q, r. ♂ (Sc. 19, 19; V. 204, 209; C. 119, 122).

15. *Zamenis dahlii*.

- Savigny, Descr. Egypte, Rept., Suppl.* p. iv. fig. 4 (1820).  
*Tyria dahlii, Fitzing. N. Class. Rept.* p. 60 (1826); *Bonap. Icon. Faun. Ital.* (1837).  
 — najadum, *Eichw. Zool. Spec.* iii. p. 174 (1831), and *Faun. Casp.-Cauc.* p. 115, pl. xxvii. (1842).  
 — ocellata, *Eichw. Zool. Spec.* iii. p. 174.  
*Coluber ocellata, Ménétr. Cat. Rais.* p. 70 (1832).  
*Psammophis dahlii, Schleg. Phys. Serp.* ii. p. 215, pl. viii. figs. 12 & 13 (1837).  
*Zamenis dahlii, Dum. & Bibr.* vii. p. 692 (1854); *Günth. Cat.* p. 107 (1858); *Strauch, Schl. Russ. R.* p. 123 (1873); *Schreib. Herp. Eur.* p. 264 (1875); *Jan, Icon. Gén.* 49, pl. vi. fig. 3 (1876); *Boettg. Ber. Senck. Ges.* 1879-80, p. 153; *Lortet, Arch. Mus. Lyon*, iii. 1883, p. 185, pl. xix. fig. 4.

Body very slender; head narrow; snout moderately prominent, obtuse. Rostral a little broader than deep, just visible from above; internasals as long as or a little shorter than the præfrontals; frontal not or but little broader than the supraocular, once and two thirds or once and three fourths as long as broad, as long as or longer than its distance from the end of the snout, shorter than the parietals; loreal longer than deep; one præocular, usually in contact with the frontal, with a subocular below it; two postoculars; temporals 2 + 2 or 2 + 3 (rarely 1 + 2); eight or nine upper labials, fourth and fifth or fifth and sixth entering the eye; four or five lower labials in contact

with the anterior chin-shields; posterior chin-shields longer than the anterior, and separated from each other by small scales. Scales in 19 rows, smooth, very narrow, with a single apical pit. Ventrals very distinctly angulate laterally, 205-218; anal divided; subcaudals 98-132. Olive anteriorly, with a few black, white-edged spots on each side, the anterior of which is sometimes confluent with its fellow and forms a nuchal collar; head uniform olive-brown above, labials, præ- and postoculars yellowish white; the greater part of the body uniform pale olive, yellowish, or pale reddish brown; uniform yellowish white inferiorly.

Total length 1080 millim.; tail 340.

Southern Europe east of the Adriatic, Asia Minor, Transcaucasia, North-western Persia, Syria, Lower Egypt.

a. ♂ (V. 210; C. 114).	Zara, Dalmatia.	Count M. G. Peracca [P.]
b-c. Hgr. (V. 217; C. 126) & yg. (V. 213; C. 114).	Spalato, Dalmatia.	Prof. Kolombatovic [P.]
d, e. ♂ (V. 213, 212; C. 121, 126).	Dalmatia.	
f. ♂ (V. 210; C. 127).	Xanthus, Asia Minor.	Haslar Collection.
g-h. ♂ (V. 211, 208; C. 124, 132).	Xanthus.	Sir C. Fellows [P.]
i. ♂ (V. 218; C. 131).	Budrum, Ruins of Halicarnassus.	H.M.S. 'Supply.'
k-l. Hgr. (V. 212, 205; C. ?, ?).	Mt. Tabor.	Canon Tristram [C.]

### 16. *Zamenis rhodorhachis*.

*Zamenis ventrimaculatus*, part., *Günth. Cat.* p. 106 (1858), and *Zool. Rec.* 1872, p. 73; *Stoliczka, Proc. As. Soc. Beng.* 1872, p. 130; *Blanf. Zool. E. Pers.* p. 414 (1876).

— *rhodorachis*, *Jan, in De Filippi, Viagg. in Pers.* p. 356 (1865); *Bouleng. Proc. Zool. Soc.* 1891, p. 632.

— *ladacensis*, *Anders. Journ. As. Soc. Beng.* xl. 1871, p. 16; *Bouleng. Faun. Ind., Rept.* p. 326 (1890); *W. L. Sclater, Journ. As. Soc. Beng.* lx. 1891, p. 238.

*Gonyosoma dorsale*, *Anders. Proc. Zool. Soc.* 1872, p. 395, fig.

Snout moderately projecting, obtuse. Rostral a little broader than deep, the portion visible from above measuring one fourth or one third its distance from the frontal; internasals as long as or shorter than the præfrontals; frontal anteriorly considerably broader than the supraocular, about once and a half as long as broad, as long as its distance from the end of the snout, shorter than the parietals; loreal usually longer than deep; one præocular, usually in contact with the frontal; a subocular below the præocular; two postoculars; temporals 2+3 (rarely 2+2); nine upper labials, fifth and sixth entering the eye; four or five lower labials in contact with the anterior chin-shields; posterior chin-shields longer than the anterior, separated from each other by scales. Scales smooth, in 19 rows. Ventrals obtusely angulate laterally, 214-262; anal divided; subcaudals 113-154. Greyish

olive, uniform or with dark cross bands, which are very close together; a bright pink or red vertebral stripe sometimes present; whitish below, the end of each ventral with an olive or blackish spot.

Total length 1150 millim.; tail 330.

Egypt, Arabia, Transcaspia, Syria, Persia, Baluchistan, Western Himalayas.

A. A pink or red vertebral stripe. (*Z. rhodorhachis*, Jan,  
*G. dorsale*, And.)

a-b. ♂ (V. 228; C. 133) & Shiraz, Persia.

yg. (V. 217; C. 137).

c. ♀ (V. 227; C. 125). Shiraz.

d. ♂ (V. 217; C. 130). Bushire, Persia. Dr. Leith [P.].

B. No vertebral stripe. (*Z. ladacensis*, And.)

a. ♀ (V. 248; C. ?). Egypt. Sir J. Wilkinson [P.].

b. Hgr. (V. 262; C. 140). Beni Hassan, Upper Egypt. M. W. Blackden, Esq. [P.].

c. Hgr. (V. 257; C. 154). Tel-el-Amarna, Upper Egypt. Dr. J. Anderson and Prof. W. M. Flinders Petrie [P.].

d. Hgr. (V. 252; C. 139). Midian, N. Arabia. Major Burton [P.].

e. Yg. (V. 229; C. ?). Near Aden. Col. Yerbury [P.].

f-h. Yg. (V. 226, 220, 226; C. 128, 137, 136). Muscat. W. T. Blanford, Esq. [P.].

i-p, q. ♂ (V. 239, 234, 235, 234; C. ?, 125, 138, ?), ♀ (V. 233, 236, 230; C. ?, ?, 133), & hgr. (V. 235; C. 140). Muscat. A. S. G. Jayakar, Esq. [P.].

r. ♀ (V. 225; C. 124). Dead Sea. Canon Tristram [C.].

s-t. ♀ (V. 223, 244; C. 113, ?). Ai Dara, W. Slope of Copet Daga, Transcaspia. M. C. Eylandt [C.].

u. ♂ (V. 218; C. 126). Bushire. Dr. Leith [P.].

v. ♂ (V. 214; C. 127). South of Regan, S.E. Persia. W. T. Blanford, Esq. [C.].

w. Yg. (V. 215; C. 135). Kalagan, Baluchistan. W. T. Blanford, Esq. [C.].

x-y. ♀ (V. 246, 232; C. 145, 133). Western Rhugti Hills, N. of Shahpoor. W. T. Blanford, Esq. [P.].

z. Hgr. (V. 243; C. 135). N.W. India. T. C. Jerdon, Esq. [P.].

a-β. ♀ (V. 244; C. 131) Gilgit. Col. Biddulph [P.].  
& yg. (V. 225; C. 129).

### 17. *Zamenis ventrimaculatus*.

*Coluber ventromaculatus*, Gray, *Ill. Ind. Zool.* ii. pl. lxxx. fig. 1 (1834).

— *chesnei*, Martin, *Proc. Zool. Soc.* 1838, p. 81.

— *diadema* (*non Schleg.*), Blyth, *Journ. As. Soc. Beng.* xxiii. 1854, p. 291.

*Zamenis ventrimaculatus*, var. A, Günth. *Cat.* p. 105 (1858).



- Platyceps semifasciatus*, *Blyth, Journ. As. Soc. Beng.* xxix. 1860, p. 114.  
*Tyria ventrimaculata*, *Cope, Proc. Ac. Philad.* 1862, p. 338.  
*Zamenis ventrimaculatus*, *Günth. Rept. Brit. Ind.* p. 253 (1864);  
*Stoliczka, Proc. As. Soc. Beng.* 1872, p. 82; *Blanf. Journ. As. Soc. Beng.* xlv. 1875, p. 208; *Theob. Cat. Rept. Brit. Ind.* p. 169 (1876); *Murray, Zool. Sind*, p. 378 (1884); *Bouleng. Faun. Ind.*, *Rept.* p. 325 (1890).  
 — *persicus*, *Jan, Icon. Gén.* 23, pl. ii. fig. 1 (1867).  
*Coluber (Platyceps) semifasciatus*, *Theob. Cat. Rept. As. Soc. Mus.* 1868, p. 52.  
*Composoma semifasciata*, *Stoliczka, Journ. As. Soc. Beng.* xxxix. 1870, p. 188; *Theob. Cat. Rept. Brit. Ind.* p. 164.  
*Zamenis ventrimaculatus*, part., *Blanf. Zool. E. Persia*, p. 414 (1876).

Snout obtuse, feebly projecting. Rostral as deep as broad or a little broader than deep, hollowed out beneath, the portion visible from above not half as long as its distance from the frontal; internasals as long as or a little shorter than the præfrontals; frontal considerably broader than the supraocular, once and one fourth to once and one third as long as broad, as long as its distance from the end of the snout or slightly longer, shorter than the parietals; loreal usually not longer than deep; one præocular, in contact with the frontal; a small subocular below the præocular; two postoculars; temporals 2+2 or 2+3; nine upper labials, fifth and sixth entering the eye; four or five lower labials in contact with the anterior chin-shields; posterior chin-shields as long as or longer than the anterior and separated by two series of scales. Scales perfectly smooth, in 19 rows. Ventrals very distinctly angulate laterally, 194–211; anal divided; subcaudals 82–119. Greyish or olive above, usually with more or less marked transverse dark bars which are narrower than the interspaces between them; a series of black spots on each side of the belly; a black oblique streak below the eye and another on the temple.

Total length 900 millim.; tail 230.

From the Euphrates through Persia, Afghanistan, and Baluchistan to Kashmere, the Punjab, Sind, Cutch, and Bombay.

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|--|------------------------------|--|
| a. ♀ (V. 210; C. 101).                       | Euphrates.                   | (Type of <i>C. chesnei</i> .)                |
| b. ♂ (V. 209; C. 106).                       | Mesopotamia.                 | Commander Jones [C.].                        |
| c-e. Yg. (V. 208, 210, 206; C. 97, 104, 99). | Fao, Persia.                 | W. D. Cumming, Esq. [P.].                    |
| f. ♂ (V. 204; C. 92).                        | Bushire, Persia.             | Dr. Leith [P.].                              |
| g. ♂ (V. 199; C. 82).                        | Bushire, Persia.             |  |
| h. ♀, imperfect (V. ?; C. 116).              | Bezd, Afghanistan.           | Dr. J. Aitchison [C.]. Afghan Boundary Comm. |
| i-k. Yg. (V. 194, 203; C. 104, 110).         | Gwadar, Baluchistan.         | W. T. Blanford, Esq. [P.].                   |
| l. ♂ (V. 211; C. 119).                       | Between Kashmere and Murree. | A. A. Kinloch, Esq. [P.].                    |
| m. ♀ (V. 209; C. 110).                       | West of Jodhpur, Sind.       | W. T. Blanford, Esq. [P.].                   |
| n. ♀ (V. 208; C. 108).                       | Kurrachee.                   | Dr. Leith [P.].                              |
| o. Hgr. (V. 200; C. 102).                    | Kurrachee. -                 | Kurrachee Mus. [E.].                         |

<i>p-s.</i> ♀ (V. 211; C. 108), hgr. (V. 210, 207; C. 106, 113), & yg. (V. 200; C. 95).	Siad.	Dr. Leith [P.].
<i>t-u.</i> Hgr. (V. 208, 199; C. 110, ?).	Sind.	F. Day, Esq. [P.].
<i>r-w.</i> ♀ (V. 200; C. 113) & yg. (V. 190; C. 103).	N.W. India.	T. C. Jerdon, Esq. [P.].
<i>x.</i> ♀ (V. 206; C. 98).	Bengal (??).	Gen. Hardwicke [P.]. (Type.)

18. *Zamenis karelinii*.

*Coluber* (Tyria) *karelinii*, *Brandt, Bull. Ac. St. Pétersb.* iii. 1833, p. 243.

*Chloristodon brachycephalus*, *Severzov, Voy. Turkest.* p. 72 (1873).

*Zamenis karelinii*, *Strauch, Schl. Russ. R.* p. 110, pl. iii. (1873);  
*Bouleng. Faun. Ind., Rept.* p. 326 (1890).

— *ventrimaculatus*, part., *Blanf. Zool. E. Pers.* p. 414 (1876).

— *ventrimaculatus*, var. *karelinii*, *Boettg. Zool. Jahrb.* iii. 1833, p. 928.

Snout more or less pointed, projecting, with sharp canthus and nearly vertical lores; rostral as deep as broad, deeply hollowed out beneath, the portion visible from above nearly half as long as its distance from the frontal; internasals as long as the præfrontals; frontal about once and a half as long as broad, as long as its distance from the end of the snout, a little shorter than the parietals; loreal as deep as long or a little deeper than long; one præocular, in contact with the frontal; a small subocular below the præocular; two postoculars, with a larger subocular below them; rarely a third subocular completely separates the eye from the labials; temporals 2+3; nine upper labials, fifth normally entering the eye; four or five lower labials in contact with the anterior chin-shields; posterior chin-shields longer than the anterior, but extremely narrow and separated from each other by two or three series of scales. Scales perfectly smooth, in 19 rows. Ventrals angulate laterally, 193-212; anal divided; subcaudals 85-110. Yellowish or pale grey above, with a dorsal series of transverse black spots or cross bands, between each pair of which there is, on each side, a black lateral spot extending on the outer border of the ventrals; a black spot below the eye and another on the temple; lower parts white or pink. A variety is uniform pale greyish above, with a bright orange vertebral stripe.

Total length 720 millim.; tail 195.

Transcaspia, Turkestan, Persia, Afghanistan, Baluchistan.

## A. Above with dark spots.

<i>a.</i> ♀ (V. 208; C. 96).	Krasnowodsk.	St. Petersburg Mus. [E.].
<i>b.</i> Yg. (V. 207; C. 99).	Kila-i-Fath, Seistan.	Gen. Goldsmid [P.].

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|--------------------------------------|-------------------------------|--|
| c. ♂ (V. 202; C. 102).               | Karman, S.E. Persia.          | W. T. Blanford, Esq.<br>[E.].                            |
| d. Yg. (V. 200; C. 105).             | Helmund River.                | Dr. J. Aitchison [C.].<br>Afghan Boundary<br>Commission. |
| e-f. ♀ (V. 206, 209; C.<br>86, 106). | Between Tirphul and<br>Kilki. | Dr. J. Aitchison [C.].<br>Afghan Boundary<br>Commission. |
| g. ♂ (V. 193; C. 98).                | Candahar.                     | Col. Swinhoe [P.].                                       |

B. Pale greyish with a bright orange vertebral stripe.

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|------------------------|-------------|--|
| h. ♀ (V. 206; C. 109). | New Gulran. | Dr. J. Aitchison [C.].<br>Afghan Boundary<br>Commission. |
|------------------------|-------------|--|

### 19. *Zamenis elegantissimus*.

*Zamenis elegantissimus*, *Günth. Proc. Zool. Soc.* 1878, p. 977, pl. lxii.

Snout strongly projecting, obtusely pointed. Rostral a little broader than deep, deeply hollowed out beneath, the portion visible from above nearly one third as long as its distance from the frontal; internasals a little shorter than the præfrontals: frontal much wider than the supraocular, once and one fourth as long as broad, as long as its distance from the end of the snout, much shorter than the parietals; loreal square or a little longer than deep; two præoculars, upper in contact with the frontal, with one or two suboculars below them; two postoculars; temporals 2+2 or 2+3; eight upper labials, fifth, or fourth and fifth, entering the eye; five lower labials in contact with the anterior chin-shields; posterior chin-shields nearly as long as the anterior, separated from each other by two series of scales. Scales smooth, in 19 rows. Ventrals very obtusely angulate laterally, 197-200; anal divided: subcaudals 79-83. Pale olive above, with a bright orange vertebral line, interrupted by broad black cross bands, which descend on to the sides of the belly and form complete rings round the tail; head with two black cross bands, the anterior on the frontal and supraoculars and passing through the eyes, the second across the parietals; belly yellowish.

Total length 690 millim.; tail 160.

Arabia.

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|---------------------------|---|-------------------------------|
| a. ♀ (V. 197; C. 79).     | Mountains east of El<br>Muwavlâh, Midian. | Major Burton [P.].<br>(Type.) |
| b. ♀ (V. ca. 200; C. 83). | Sinaitic Peninsula.                       | A. H. Hart, Esq.<br>[P.].     |

### 20. *Zamenis florulentus*.

? *Coluber guttatus* (*non Linn.*), *Forsk. Descr. Anim.* p. 14 (1775).

? *Coluber cahirinus*, *Gmel. S. N. i.* p. 1115 (1788).

*Coluber florulentus*, *Geoffr. Descr. Egypte, Rept.* pp. 146 & 151,

- pl. viii. fig. 2 (1809); *Savigny, op. cit., Suppl.* pl. iv. fig. 3 (1829);  
*Schleg. Phys. Serp.* ii. p. 166 (1837).  
*Zamenis florulentus, Dum. & Bibr.* vii. p. 693 (1854); *Jan, Icon.*  
*Gén.* 48, pl. vi. fig. 4 (1876).  
 — ventrimaculatus, part., *Günth. Cat.* p. 105 (1858).  
 — dablii, part., *Günth. l. c.* p. 107.

Snout long, moderately projecting, obtuse; eye smaller than in the allied species. Rostral once and one fourth to once and one third as broad as deep, the portion visible from above measuring one third or one fourth its distance from the frontal; internasals as long as or a little shorter than the præfrontals, as long as broad or a little longer; frontal anteriorly much broader than the supra-ocular, once and one third to once and a half as long as broad, as long as or a little longer than its distance from the end of the snout, shorter than the parietals; loreal longer than deep; one (rarely two) præocular, in contact with the frontal, with one or two sub-oculars below; two postoculars; temporals 2+2 or 2+3; nine upper labials, fifth and sixth usually entering the eye; four or five lower labials in contact with the anterior chin-shields; posterior chin-shields as long as or a little longer than the anterior, very narrow and separated from each other by two or three series of scales. Scales smooth, in 21 rows (rarely 23, specs. *h* and *p*). Ventrals obtusely angulate laterally, 201-228; anal divided; sub-caudals 82-100. Greyish or brownish olive above, with blackish square spots disposed quincuncially; nape and anterior part of body with a dorsal series of blackish cross bars and two alternating series of spots on each side; head with more or less distinct symmetrical dark markings; some specimens uniform olive; labials yellowish, usually each with a blackish spot; ventrals yellowish white or coral-red, with a blackish spot at each end, rarely obscured with brown dots.

Total length 1090 millim.; tail 220.

Egypt.

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|--|---------------------------------|---|
| <i>a, b-d.</i> ♂ (V. 212, 213; C. 92, 93), ♀ (V. 228; C. 89), & yg. (V. 201; C. 98). | Egypt.                          | Sir J. Wilkinson [P.].                                |
| <i>e.</i> Yg. (V. 211; C. 90).   | Egypt.                          | J. Burton, Esq. [P.].                                 |
| <i>f.</i> Hgr. (V. 208; C. 91).  | Egypt.                          | Zoological Society.                                   |
| <i>g.</i> Yg. (V. 219; C. 94).   | Egypt.                          |   |
| <i>h-m.</i> ♂ (V. 210, 213; C. 92, 93) & ♀ (V. 216, 222, 217; C. 86, 100, 82).       | Abu - Roash, W. of Cairo.       | Dr. J. Anderson [P.].                                 |
| <i>n.</i> Yg. (V. 220; C. 88).   | Pyramids of Gizeh.              | Dr. J. Anderson [P.].                                 |
| <i>o.</i> ♀ (V. 211; C. 95).   | Tel - el - Amarna, Upper Egypt. | Dr. J. Anderson and Prof. W. M. Flinders Petrie [P.]. |
| <i>p.</i> Yg. (V. 214; C. ?).  | Assiout, Upper Egypt.           | Dr. J. Anderson [P.].                                 |
| <i>q-r.</i> ♀ (V. 212; C. 94) & yg. (V. 208; C. 97).                                 | Luxor.                          | Dr. J. Anderson [P.].                                 |



a. ♀ (V. 211; C. 87).  
t. Yg. (V. 215; C. 95).

Assouan.  
Assouan.

Dr. J. Anderson [P].  
O. Charlton, Esq.  
[P].

## 21. *Zamenis gracilis*.

*Zamenis ventrimaculatus*, var. B, *Günth. Cat.* p. 106 (1858).  
— *gracilis*, *Günth. Ann. & Mag. N. H.* (3) ix. 1862, p. 125, and  
*Rept. Brit. Ind.* p. 254, pl. xxi. fig. H (1864); *Theob. Cat. Rept.*  
*Brit. Ind.* p. 170 (1876); *Murray, Zool. Sind*, p. 378 (1884);  
*Bouleng. Faun. Ind., Rept.* p. 327 (1890).  
*Tyria gracilis*, *Cope, Proc. Ac. Philad.* 1862, p. 338.

Snout obtuse. Rostral nearly as deep as broad, just visible from above; suture between the internasals a little shorter than that between the præfrontals; frontal about once and a half as long as broad, slightly longer than its distance from the end of the snout, nearly as long as the parietals; loreal nearly as deep as long; one præocular, with a small subocular below it; two postoculars; temporals 2+2; nine upper labials, fifth and sixth entering the eye; four or five lower labials in contact with the anterior chin-shields; posterior chin-shields as long as or longer than the anterior, separated anteriorly by two scales. Scales smooth, in 21 rows. Ventrals angulate laterally, 206-228; anal divided; subcaudals 118-127. Yellowish above, with a series of large round brown spots edged with black, separated by narrow interspaces; these spots become more indistinct on the posterior part of the body; a black cross band on the snout and three angular dark brown black-edged bands on the head, the anterior between the eyes, the posterior extending on the nape; lower parts yellowish, with an irregular series of black spots on each side.

Total length 910 millim.; tail 260.

Deccau and Sind.

a. ♀ (V. 213; C. 121).	Deccan.	Col. Sykes [P].	} (Types).
b-e. ♀ (V. 222, 216; C. 120) & yg. (V. 206, 208; C. 127, 118).	India.	W. Masters, Esq. [P].	
f. ♀ (V. 228; C. 118).	— ?	Chatham Mus.	

## 22. *Zamenis fasciolatus*.

*Russell, Ind. Serp.* i. pl. xxi. (1796).  
*Coluber fasciolatus*, *Shaw, Zool.* iii. p. 528 (1802); *Cantor, Cat. Mal. Rept.* p. 72 (1847).  
— *hebe*, *Daud. Rept.* vi. p. 385 (1803).  
— *curvirostris*, *Cantor, Proc. Zool. Soc.* 1839, p. 51.  
*Coryphodon fasciolatus*, *Günth. Cat.* p. 109 (1858).  
*Tyria fasciolata*, *Cope, Proc. Ac. Philad.* 1862, p. 338.  
*Zamenis fasciolatus*, *Günth. Rept. Brit. Ind.* p. 254, pl. xxi. fig. F (1864); *Stoliczka, Journ. As. Soc. Beng.* xl. 1871, p. 431; *Theob. Cat. Rept. Brit. Ind.* p. 176 (1876); *Bouleng. Faun. Ind., Rept.* p. 327 (1890).

Snout obtuse, curved and projecting. Rostral large, broader than deep, the portion visible from above more than half its distance from the frontal; internasals as long as the præfrontals; frontal anteriorly much broader than the supraocular, once and a quarter to once and a half as long as broad, nearly as long as its distance from the end of the snout, or as the parietals; loreal as long as deep or longer than deep; one præocular, in contact with the frontal, usually with a small subocular below it; two or three postoculars; temporals 2+2 or 2+3; eight upper labials, fourth and fifth entering the eye; four or five lower labials in contact with the anterior chin-shields; posterior chin-shields nearly as long as the anterior, separated from each other by two or three series of scales. Scales smooth, in 21 or 23 rows. Ventrals 197-225; anal divided; subcaudals 73-92. Yellowish or brownish olive above, with narrow white, brown, and black variegated cross bands on the anterior half of the body; these bands may entirely disappear in the adult; lower parts uniform yellowish.

Total length 1060 millim.; tail 220.

Madras Presidency, Northern India, Province Wellesley (Malay Peninsula).

a. Hgr. (V. 200; C. ?).	Vizagapatam District.	Dr. P. Russell.
b. Hgr. (V. 197; C. 88).	Madras.	T. C. Jerdon, Esq. [P.].
c. Yg. (V. 209; C. 92).	Madras.	Sir W. Elliot [P.].
d. Yg. (V. 212; C. 82).	Benares.	Dr. Sayer [P.].
e. Yg. (V. 225; C. 77).	Gwalior.	C. Maries, Esq. [E.].
f-g. ♂ (V. 223, 211; C. 87, ?).	India.	Zoological Society.
h. Yg. (V. 198; C. 87).	Prov. Wellesley.	Dr. Cantor.

### 23. *Zamenis ravergeri*.

*Coluber ravergeri*, *Ménétr. Cat. Rais.* p. 69 (1832).

— *maculatus* (non Merr.), *Dwigubsky, Nat. Hist. Russ., Amphib.* p. 26 (1832).—*Teste Strauch.*

*Zamenis caudelineatus*, *Günth. Cat.* p. 104 (1858); *Jan, Icon. Gén.* 23, pl. iii. (1867).

*Periops caudelineatus*, *Jan, in De Filippi, Viagg. Pers.* p. 355 (1865).

*Zamenis ravergeri*, *Strauch, Schlung. Russ. R.* p. 127 (1873); *Blanf. Zool. E. Pers.* p. 417 (1876), and *2nd Yark. Miss., Rept.* p. 22 (1878).

— *fedtschenkoi*, *Strauch, l. c.* p. 135, pl. iv.

— *ravergeri*, var. *fedtschenkoi*, *Boettg. Zool. Jahrb.* iii. 1888, p. 927.

Snout feebly projecting, obtuse. Rostral once and one third to once and a half as broad as deep, the portion visible from above measuring one third or one fourth its distance from the frontal; internasals as long as or a little shorter than the præfrontals; frontal anteriorly considerably broader than the supraocular, once and one fourth to once and a half as long as broad, as long as or a

little longer than its distance from the end of the snout, shorter than the parietals; loreal as long as deep or a little longer; two præoculars, with one or two suboculars below them; upper præocular in contact with the frontal, usually more than half as long as the supraocular; two (rarely three) postoculars; temporals very small and scale-like; nine or ten upper labials, fifth and sixth entering the eye; four or five lower labials in contact with the anterior chin-shields; posterior chin-shields about as long as the anterior, but narrower and separated from each other by two or three rows of scales. Scales with a more or less distinct, obtuse, or faint keel, in 21 (rarely 23) rows. Ventrals obtusely angulate laterally, 190-222; anal divided; subcaudals 75-101. Pale buff or greyish above, with a dorsal series of dark rhomboidal spots or narrow cross bars, alternating with a series of smaller spots on each side; the dorsal spots usually confluent into longitudinal streaks on the tail; an oblique dark streak below the eye, and another from the eye to the angle of the mouth; head sometimes nearly entirely black, belly uniform whitish or more or less obscured with blackish dots.

Total length 1330 millim.; tail 320.

Transcaucasia, Persia, Transcaspia, Turkestan, Afghanistan.

- a-c, d-e.* ♂ (Sc. 21, 21; Shiraz. (Types of *Z. caudolineatus*.)  
V. 197, 194; C. 94,  
90), ♀ (Sc. 21, 21; V.  
201, 210; C. 95, 87),  
& yg. (Sc. 21; V. 192;  
C. 89).
- f.* ♂ (Sc. 21; V. 202; C. Dehbid, Persia.  
101).
- g.* ♀ (Sc. 23; V. 211; Karman. W. T. Blanford, Esq.  
C. 82). [E.]
- h.* ♀ (Sc. 21; V. 209; C. Kohrud, N. of Isfa- W. T. Blanford, Esq.  
93). [E.]
- i.* ♂ (Sc. 21; V. 193; Ain Dara, W. slope of M. C. Eylandt [C].  
C. ♀). Copet Dagh, Trans-  
caspia.
- k.* Hgr. ♀ (Sc. 21; V. Nuhar, W. slope of M. C. Eylandt [C].  
206; C. 82). Copet Dagh, Trans-  
caspia.
- l-m.* ♂ (Sc. 21; V. 190; Puli Hatun, Trans- M. C. Eylandt [C].  
C. 82) & yg. (Sc. 21;  
V. 206; C. 86). caspia.
- n.* Hgr. (Sc. 23; V. 218; Samarkand. St. Petersburg Mus.  
C. 97). [E.]. (As typical of  
*Z. fedtschenkoi*.)
- o.* ♀ (Sc. 21; V. 216; Zandra, Afghanistan. Mr. J. A. Murray  
C. 89). [P.]
- p.* ♂ (Sc. 21; V. 197; Tirphul. Dr. J. Aitchison [C].  
C. 85). Afghan Boundary Commission.
- q.* ♀ (Sc. 21; V. 211; Chin Kilak. Dr. J. Aitchison [C].  
C. ♀). Afghan Boundary Commission.
- r.* Hgr. (Sc. 21; V. 201; Old Gulran. Dr. J. Aitchison [C].  
C. 84). Afghan Boundary Commission.

24. *Zamenis nummifer*.

*Savigny, Descr. Egypte, Rept., Suppl.* pl. iv. fig. 6 (1809).

♀ *Coluber tyria, Linn. Mus. Ad. Frid.* ii. p. 45 (1764), and *S. N. i.* p. 386 (1766).

♀ *Coluber barbarus, Boie, Isis,* 1827, p. 537.

*Coluber nummifer, Reuss, Mus. Senckenb.* i. p. 135 (1834).

*Zamenis hippocrepis, var. ?*, *Günth. Cat.* p. 104 (1858).

*Periops neglectus, Jan, Elenco,* p. 60 (1863), and *Icon. Gén.* 48, pl. iv. fig. 3 (1876).

*Zamenis caudolineatus, Günth. Proc. Zool. Soc.* 1864, p. 489.

— *neglectus, F. Müll. Verh. nat. Ges. Basel,* vi. 1878, p. 667.

— *ravergieri, var. nummifer, Boettg. Ber. Senck. Ges.* 1879–80, p. 154.

— *nummifer, Bouleng. Proc. Zool. Soc.* 1891, p. 633.

This form should perhaps be regarded as a variety of *Z. ravergieri* rather than as a distinct species. It differs in having the upper portion of the præocular smaller, the anterior pair of temporals more enlarged, frequently a subocular separating the sixth labial from the eye, and the scales in 23 or 25 rows. Ventrals 197–216; anal entire or divided; subcaudals 79–101. Greyish or pale olive above, with a dorsal series of large brown or olive black-edged rhomboidal spots, and an alternating series of smaller ones on each side; these spots confluent into three longitudinal streaks on the tail; head with symmetrical markings as in *Z. ravergieri*; lower parts yellowish, speckled with brown; a series of blackish spots along each side of the belly.

Total length 1030 millim.; tail 230.

Egypt, Syria, Cyprus, Asia Minor.

- |  |               |                           |
|--|---------------|---------------------------|
| a. ♂ (Sc. 23; V. 203; A. 2; C. 88).  | Egypt.        | J. Burton, Esq. [P.].     |
| b-c. ♀ (Sc. 25; V. 210; A. 2; C. 86) & yg. (Sc. 25; V. 198; A. 1; C. 86).  | Jerusalem.    | Canon Tristram [C.].      |
| d. ♂ (Sc. 25; V. 205; A. 2; C. 82).  | Hiram's Tomb. | Canon Tristram [C.].      |
| e. ♀ (Sc. 25; V. 210; A. 2; C. 82).  | Nazareth.     | Canon Tristram [C.].      |
| f-i ♂ (Sc. 23, 25; V. 204, 211; A. 2, 1; C. 79, 84), ♀ (Sc. 23; V. 216; A. 2; C. 85), & yg. (Sc. 23; V. 209; A. 1; C. 88). | Cyprus.       | Lord Lilford [P.].        |
| k-m. ♂ (Sc. 25; V. 205; A. 1; C. 90) & ♀ (Sc. 25, 23; V. 215, 205; A. 2, 1; C. 86, 83).                                    | Cyprus.       | Dr. C. E. Cullen [P.].    |
| n. ♂ (Sc. 25; V. 206; A. 1; C. 84).  | Cyprus.       | R. L. Kenyon, Esq. [P.].  |
| o. Yg. (Sc. 23; V. 199; A. 2; C. ?).   | Asia Minor.   | C. G. Danford, Esq. [P.]. |
| p. Yg. (Sc. 23; V. 215; A. 2; C. 92).  | Xanthus.      | Sir C. Fellows [P.].      |



- q. Yg. (Sc. 23; V. 203; A. 2; Xanthus. Haslar Collection.  
C. 101).  
r. Yg. (Sc. 23; V. 197; A. 1; Rhodes. C. G. Danford, Esq.  
C. 89). [P.]

### 25. *Zamenis socotræ*.

*Zamenis socotræ*, *Günth. Proc. Zool. Soc.* 1881, p. 463, pl. xli.

Snout feebly projecting, obtuse. Rostral once and one third as broad as deep, the portion visible from above measuring one fourth to one third its distance from the frontal; internasals as long as or shorter than the præfrontals; frontal much wider than the supraocular, once and a half as long as broad, longer than its distance from the end of the snout, a little shorter than the parietals; loreal nearly twice as long as deep; two præoculars, separated from the frontal, with a subocular below them; two postoculars, and a subocular separating the eye from the sixth and seventh labials; temporals 3+3 or 2+3; ten upper labials, fifth entering the eye; four or five lower labials in contact with the anterior chin-shields; posterior chin-shields longer than the anterior, but extremely narrow and separated from each other by two or three series of scales. Scales smooth, in 23 rows. Ventrals obtusely angulate laterally, 219-228; anal divided; subcaudals 107-119. Head olive above; body with olive, sometimes black-edged transverse bands, separated by narrower yellowish or reddish interspaces; belly yellowish or pale olive.

Total length 860 millim.; tail 225.

Socotra.

- a-c. ♂ (V. 219; C. 119) & ♀ Socotra. Prof. I. B. Balfour [C].  
(V. 228, 222; C. 117, 107). (Types.)

### 26. *Zamenis algirus*.

*Zamenis florulentus* (*non Schleg.*), *Gervais, Mém. Ac. Sc. Montpellier*, iii. 1857, p. 512, pl. v. fig. 4.

—, sp., *Strauch, Érp. Alg.* p. 63 (1862).

*Periops algira*, *Jan, Élenco*, p. 60 (1863), and *Icon. Gtn.* 48, pl. iv. fig. 2 (1876).

*Zamenis* (*Periops*) *algirus*, *Boetty. in Kobelt, Reis. Alg. Tunis*, p. 459 (1885).

— *algirus*, *Bouleng. Tr. Zool. Soc.* xiii. 1891, p. 147; *König, Sitzb. Niederrhein. Ges. Nat.* 1892, p.; *Anders. Proc. Zool. Soc.* 1892, p. 19.

Snout feebly projecting, obtuse. Rostral slightly broader than deep, just visible from above; internasals shorter than the præfrontals; frontal anteriorly considerably broader than the supraocular, about once and a half as long as broad, as long as or a little longer than its distance from the end of the snout, shorter than the parietals; loreal a little longer than deep; one præocular, in contact with the frontal, with a subocular below it; two postoculars and a subocular; temporals 2+3; nine upper labials, fifth or sixth usually entering the eye, but sometimes separated by an additional

subocular; four or five lower labials in contact with the anterior chin-shields; posterior chin-shields as long as the anterior, narrow and separated from each other by two or three series of scales. Scales smooth, in 25 (rarely 23) rows. Ventrals obtusely angulate laterally, 214-232; anal divided or entire; subcaudals 87-104. Pale olive or greyish above, with three alternating series of blackish transverse bars, and a series of black spots along each side of the belly; a more or less distinct blackish crescentic band on the nape, extending to the sides of the throat; a blackish spot below the eye; lower parts white.

Total length 940 millim.; tail 230.

Algeria and Tunisia.

- a. ♂ (V. 215; A. 2; C. 99). Tozeur, Tunisia. M. F. Lataste [P].  
 b. Yg. (V. 214; A. 1; C. 92). Houmt-es-Souk, M. F. Lataste [P].  
     Djerba, Tunisia.  
 c-d. ♂ (V. 218; A. 1; C. 104) Duirat, Tunisia. Dr. J. Anderson [P].  
     & ♀ (V. 231; A. 2; C. 87).  
 e. Yg. (V. 222; A. 2; C. 99). — ?

## 27. *Zamenis hippocrepis*.

- Coluber hippocrepis*, *Linn. Mus. Ad. Frid.* p. 36, pl. xvi. fig. 2 (1754), and *S. N. i.* p. 388 (1766); *Daud. Rept.* vi. p. 249 (1803); *Bonap. Icon. Faun. Ital.* (1835); *Schleg. Phys. Serp.* ii. p. 164, pl. vi. figs. 15 & 16 (1837).  
 — domesticus, *Linn. S. N. i.* p. 389; *Daud. t. c.* p. 242.  
*Natrix hippocrepis*, *Laur. Syn. Rept.* p. 77 (1768).  
 — bahiensis, *Wagl. in Spir, Serp. Bras.* p. 27, pl. x. fig. 1 (1824).  
*Periops hippocrepis*, *Wagl. Icon. Amph.* pl. xxxi. (1830); *Guichen. Explor. Sc. Alg., Rept.* p. 19 (1850); *Dum. & Bibr.* vii. p. 675 (1854); *De Bella, Faun. Ital., Rett. Anf.* p. 40 (1874); *Schreib. Herp. Eur.* p. 260 (1875); *Jan, Icon. Gén.* 48, pl. iv. fig. 1 (1876); *Camerano, Mon. Ofid. Ital., Colubr.* p. 48 (1891).  
*Calopeltis hippocrepis*, *Eichw. N. Mém. Soc. Nat. Mosc.* ix. 1851, p. 441.  
*Zamenis hippocrepis*, *Günth. Cat.* p. 103 (1858); *Strauch, Erp. Alg.* p. 61 (1862); *Buettg. Abh. Senck. Ges.* ix. 1874, p. 157, xii. 1881, p. 374, xiii. 1883, p. 100, and in *Kobelt, Reis. Alg. Tunis*, p. 459 (1885); *Bouleng. Tr. Zool. Soc.* xiii. 1891, p. 147.  
*Tyria hippocrepis*, *Cope, Proc. Ac. Philad.* 1862, p. 338.

Snout feebly projecting, obtuse. Rostral once and one third to once and a half as broad as deep, the portion visible from above measuring about one third its distance from the frontal; internasals as long as or a little shorter than the prefrontals; frontal considerably broader than the supraocular, once and one fourth to once and a half as long as broad, as long as or a little longer than its distance from the end of the snout, shorter than the parietals, and in contact with the præocular; loreal longer than deep; one or two præoculars; two postoculars; a series of three or four suboculars usually completely separates the eye from the labials; temporals 2+3 or 3+3; eight or nine (rarely ten) upper labials,

fifth or sixth very rarely entering the eye; four lower labials in contact with the anterior chin-shields; posterior chin-shields longer than the anterior, narrow and separated from each other by two or three series of scales. Scales perfectly smooth, in 25 to 29 rows, usually 27. Ventrals very distinctly angulate laterally, 222-258; anal divided (rarely entire); subcaudals 77-107. Brown, reddish, or pale olive above, with a dorsal series of large dark brown, black-edged rhomboidal spots, on each side of which is a series of smaller, alternating spots; these spots may be black and so large as to reduce the ground-colour to a mere chain or series of X's of pale colour; a dark cross band between the eyes, and a  $\Lambda$ - or horseshoe-shaped band on the back of the head, which may be confluent with an elongate spot on the nape; the spots confluent into three longitudinal streaks on the tail; yellowish or red inferiorly, with or without black dots, but constantly with a lateral series of black spots.

Total length 1340 millim.; tail 270.

Spain and Portugal, Sardinia, Morocco, Algeria, Tunisia.

- |  |                             |                           |
|--|-----------------------------|---------------------------|
| a. ♂ (Sc. 27; V. 222; A. 2; C. ?).   | Gibraltar.                  | College of Surgeons.      |
| b. ♀ (Sc. 27; V. 232; A. 2; C. 107).   | Spain.                      | Lord Lilford [P.].        |
| c. Yg. (Sc. 27; V. 228; A. 2; C. 100).   | Portugal.                   | Dr. A. Farre [P.].        |
| d-e. ♂ (Sc. 27; V. 235; A. 2; C. 87) & yg. (Sc. 25; V. 229; A. 2; C. 90).                      | Cagliari, Sardinia.         | Count M. G. Peracca [P.]. |
| f. ♂ (Sc. 27; V. 228; A. 2; C. ?).   | Mogador.                    | Zoological Society.       |
| g. ♂ (Sc. 27; V. 220; A. 1; C. 92).  | Tangier.                    | Mr. Fraser [C.].          |
| h-k. Hgr. ♀ (Sc. 27; V. 232; A. 2; C. 90) & yg. (Sc. 27, 27; V. 231, 225; A. 2, 2; C. 93, 80). | Tangier.                    | Mr. H. Vaucher [C.].      |
| l. Hgr. (Sc. 27; V. 249; A. 2; C. 89).   | Hamman Meskoutine, Algeria. | Dr. J. Anderson [P.].     |
| m. Yg. (Sc. 27; V. 225; A. 2; C. 88).  | Algiers.                    | Dr. J. Anderson [P.].     |
| n. Yg. (Sc. 27; V. 237; A. 2; C. 90).  | Tunis.                      | Mr. Fraser [C.].          |
| o. Hgr., skel.   | Mogador.                    | C. A. Payton, Esq. [P.].  |
| p. Skull.  | Algeria.                    |                           |

## 28. *Zamenis dorri*.

Periops dorri, *Lataste, Le Natur.* 1888, p. 227.

Head very distinct from neck, with broadly rounded snout. Rostral broad, just visible from above; internasals slightly shorter than the præfrontals; frontal a little longer than broad, shorter than the parietals; loreal longer than deep; one præocular, in

contact with the frontal; two postoculars, with a subocular below; three anterior temporals; ten upper labials, fourth and fifth entering the eye. Scales perfectly smooth, in 31 rows. Ventrals distinctly angulate laterally, 245-254; anal divided; subcaudals 84. Above greyish or reddish, with a dorsal series of X-shaped dark spots, and, on each side, a series of light round spots; flanks with small brown spots; head with symmetrical dark markings.

Total length 735 millim.; tail about one fifth of the total.

Bakel, Upper Senegal.

### 29. *Zamenis diadema*.

*Russell, Ind. Serp.* ii. pl. xxx. (1801); *Geoffr. Descr. Egypte, Rept.* pl. viii. fig. 1 (1809).

*Coluber versicolor* (*Opp.*), *Wagl. Syst. Amph.* p. 189 (1830).

— *diadema*, *Schleg. Phys. Serp.* ii. p. 148 (1837).

— *cliffordii*, *Schleg. l. c.* p. 163, pl. vi. figs. 13 & 14.

*Periops parallelus*, *Dum. & Bibr.* vii. p. 678 (1854); *Jan, Icon. Gén.* 20, pl. ii. (1867).

*Zamenis cliffordii*, *Günth. Cat.* p. 104 (1858); *Strauch, Erp. Alg.* p. 61 (1862), and *Schlang. Russ. R.* p. 105 (1873); *Blanf. Proc. Zool. Soc.* 1881, p. 679.

— *diadema*, *Günth. Rept. Brit. Ind.* p. 252, pl. xxi. fig. G (1864); *Anders. Proc. Zool. Soc.* 1871, p. 174; *Stoliczka, Proc. As. Soc. Beng.* 1872, p. 82; *Blanf. Zool. E. Pers.* p. 412 (1876), and *Journ. As. Soc. Beng.* xlviii. 1879, p. 125; *Murray, Zool. Sind.* p. 377 (1884); *Fischer, Jahresb. Hamb. Wiss. Anst.* ii. 1885, p. 102; *Boettg. Zool. Jahrb.* iii. 1888, p. 925; *Bouleng. Faun. Ind., Rept.* p. 328 (1890), and *Tr. Zool. Soc.* xiii. 1891, p. 148.

*Periops parallelus*, var. *schirazana*, *Jun, in De Filippi, Viagg. Pers.* p. 356 (1865).

*Zamenis* (*Periops*) *versicolor*, *Boettg. in Kobelt, Reisen Alg. Tunis*, p. 458 (1885).

Rostral as deep as broad of a little broader than deep, visible from above; prefrontals usually broken up into several shields, there being frequently three transverse series of shields between the rostral and the frontal; frontal once and one fourth to once and a half as long as broad, as long as or slightly shorter than its distance from the end of the snout, and usually shorter than the parietals; loreals three to five; two to four (rarely one) præoculars, the upper usually in contact with the frontal; three or four postoculars; a series of suboculars separate the labials from the eye; temporals small and numerous, scale-like; ten to thirteen upper labials; five lower labials in contact with the anterior chin-shields, which are nearly as long as the posterior. Scales usually more or less obtusely keeled, in 25 to 33 rows. Ventrals usually obtusely angulate laterally, 210-278; anal entire; subcaudals 65-110. Pale buff or sandy grey above, with more or less marked dark spots, of which the median usually form a series of rhombs; lower parts white, rarely with small blackish spots. A variety (*atriceps*, Fischer) occurs in Northern India, which is remarkable for having the head entirely



or partially black above, and the body irregularly spotted or blotched with black (spec. *a*,  $\gamma$ ,  $\delta$ ,  $\epsilon$ ).

Total length 1800 millim.; tail 340.

North Africa, Southern Asia from Arabia to Turkestan, Cashmere and North-western India.

- a-b*. ♂ (Sc. 29, 29; V. 222, 225; C. 68, 73). N.W. Africa. Zoological Society.
- c*. Hgr. (Sc. 31; V. 248; C. ?). Between Biskra and Tuggurt, Algeria. Dr. J. Anderson [P.]
- d*. ♂ (Sc. 25; V. 219; C. 74). Duirat, Tunisia. Dr. J. Anderson [P.]
- e*. Hgr. (Sc. 27; V. 245; C. 70). Tripoli. J. Ritchie, Esq. [P.]
- f*. ♀ (Sc. 29; V. 238; C. 75). Egypt. Sir J. Wilkinson [P.]
- g-h*. Yg. (Sc. 29, 29; V. 240, 216; C. 80, 75). Egypt. J. Burton, Esq. [P.]
- i-m*. ♂ (Sc. 27, 29; V. 227, 221; C. 75, 71), ♀ (Sc. 29; V. 224; C. 75), & yg. (Sc. 29; V. 244; C. 70). Pyramids of Gizeh, Egypt. Dr. J. Anderson [P.]
- n-o*. ♂ (Sc. 29; V. 222; C. 77) & ♀ (Sc. 29; V. 234; C. ?). Beni Hassan, Upper Egypt. Dr. J. Anderson and W.M. Blackden, Esq. [P.]
- p-q*. ♂ (Sc. 29; V. 221; C. 77) & yg. (Sc. 31; V. 225; C. ?). Tel-el-Amarna, Upper Egypt. Dr. J. Anderson and Prof. W. M. Flinders Petrie [P.]
- r*. Yg. (Sc. 27; V. 238; C. 78). Sandy Coast, Midian, Arabia. Major Burton [P.]
- s-t, u*. ♂ (Sc. 27; V. 211; C. 80), ♀ (Sc. 27; V. 226; C. 73), & hgr. (Sc. 25; V. 212; C. 79). Muscat. A. S. G. Jayakar, Esq. [P.]
- v*. ♀ (Sc. 29; V. 230; C. 80). Persia.
- w*. ♀ (Sc. 31; V. 248; C. 86). Dehbeed, Persia.
- x-y*. ♀ (Sc. 27; V. 241; C. 85) & yg. (Sc. 25; V. 234; C. 84). Karman, S.E. Persia. W. T. Blanford, Esq. [C.]
- z*. Yg. (Sc. 27; V. 227; C. 88). Saman, Dasht, Baluchistan. W. T. Blanford, Esq. [C.]
- a*. Hgr. (Sc. 27; V. 239; C. 87). Gwadar, Baluchistan. W. T. Blanford, [P.]
- \beta*. Yg. (Sc. 27; V. 218; C. 90). Between Quetta and Nushki. Dr. J. Aitchison [C.] Afghan Boundary Com.
- \gamma*. Yg. (Sc. 27; V. 227; C. 82). Between Nushki and the Helmund. Dr. J. Aitchison [C.] Afghan Boundary Com.
- \delta*. Hgr. (Sc. 29; V. 239; C. 90). Tirphul. Dr. J. Aitchison [C.] Afghan Boundary Com.
- \epsilon*. ♂ (Sc. 29; V. 220; C. 82). Panch Pai. Dr. J. Aitchison [C.] Afghan Boundary Com.

ζ. Hgr. (Sc. 27 ; V. 247 ; C. 100).	Afghanistan.	Dr. Griffith.
η. ♀ (Sc. 29 ; V. 278 ; C. 107).	Gilgit.	Col. Biddulph [P.]
θ. Hgr. (Sc. 29 ; V. 240 ; C. 103).	Kurrachee.	Messrs. v. Schagin- tweit [C.]
ι-κ. Yg. (Sc. 29, 31 ; V. 244, 238 ; C. 100, ?).	Kotree, Sind.	Dr. Leith [P.]
λ. ♂ (Sc. 29 ; V. 239 ; C. 110).	Ajmere.	W. T. Blanford, Esq. [P.]
μ. Yg. (Sc. 31 ; V. 228 ; C. ?).	Punjab.	E. Ind. Comp.
ν. ♀ (Sc. 29 ; V. 247 ; C. 107).	Punjab.	W. B. Farr, Esq. [P.]
ξ. ♀ (Sc. 27 ; V. 243 ; C. 102).	Agra.	Col. Beddome [C.]
ο. ♀ (Sc. 29 ; V. 244 ; C. 103).	Harrand.	W. T. Blanford, Esq. [P.]

### 30. *Zamenis arenarius* \*. (PLATE XXVIII. fig. 2.)

*Zamenis arenarius*, *Bouleng. Faun. Ind., Rept.* p. 329 (1890).

Very closely allied to *Z. diadema*, but distinguished by the much larger rostral, which is considerably deeper than broad and wedged in far between the internasals; the portion of the rostral visible from above measures one half to two thirds its distance from the frontal. Three or four præfrontals in a transverse row; frontal nearly as long as its distance from the end of the snout, shorter than the parietals; three or four loreals; two præoculars, three post-oculars, and three suboculars separating the eye from the labials; temporals small, scale-like; ten upper labials; five lower labials in contact with the anterior chin-shields, which are as long as the posterior. Scales obtusely keeled anteriorly, very distinctly posteriorly, in 25 or 27 rows. Ventrals not angulate laterally, 227; anal entire; subcaudals 80. Cream-colour or pale buff, with darker spots disposed quineuncially, and a longitudinal streak on each side of the nape; lower parts uniform white.

Total length (of the specimen in the Calcutta Museum) 930 millim.; tail 175.

Northern India (Sind and Rajpootana).

a. Head and anterior part of body	Kurrachee.	J. A. Murray, Esq. [P.]	} (Types.)
b. Head and anterior part of body.	Sind.	F. Day, Esq. [P.]	

### 31. *Zamenis microlepis*.

*Spalerosophis microlepis*, *Jan, in De Filippi, Viagg. Pers.* p. 356 (1865); *Blanf. Zool. E. Pers.* p. 411 (1876).

*Loxodon microlepis*, *Jan, Icon. Gén.* 20, pl. iii. (1867).

*Zamenis microlepis*, *Bouleng. Proc. Zool. Soc.* 1891, p. 633.

\* Since the original description of this species, I have examined a perfect specimen from Rajpootana, preserved in the Calcutta Museum and kindly submitted to me by Mr. W. L. Sclater.

Snout obtuse, feebly projecting. Rostral broader than deep, just visible from above; upper surface of snout with numerous small shields; frontal broken up into three shields; loreal and temporal regions covered with numerous small scales; upper labials 14 or 15, separated from the eye by a series of suboculars; six lower labials in contact with the anterior chin-shields; posterior chin-shields narrow and separated from each other by two series of scales. Scales smooth, in 41 or 43 rows. Ventrals 263; anal entire; subcaudals 100. Pale buff above, with blackish spots which are rectangular and transverse on the anterior part of the body; a blackish streak along each side of the neck and another from the nostril to the angle of the mouth, passing through the eye; yellowish white inferiorly.

Total length 1230 millim.; tail 240.

Persia (Laristan and Shiraz).

### 55. LYTORHYNCHUS.

Heterodon, part., *Dum. & Bibr. Erp. Gén.* vii. p. 764 (1854).

Simotes, part., *Günth. Cat. Col. Sn.* p. 23 (1858).

Lytorhynchus, *Peters, Mon. Berl. Ac.* 1862, p. 272; *Bouleng. Ann. & Mag. N. II.* (5) xx. 1887, p. 414, and *Faun. Ind., Rept.* p. 322 (1890).

Chatachlein, *Jan, Arch. Zool. Anat. Phys.* ii. 1863, p. 228.

Acontiphis, *Günth. Proc. Zool. Soc.* 1875, p. 232.

Catachlæna, *Blanf. Proc. Zool. Soc.* 1881, p. 678.

Phyllorhynchus, *Stejneger, Proc. U.S. Nat. Mus.* xiii. 1890, p. 151;

*Cope, Proc. U.S. Nat. Mus.* xiv. 1892, p. 617.

Maxillary teeth 6 to 9, posterior much longer than anterior; mandibular teeth subequal. Head slightly distinct from neck, with cuneiform projecting snout; eye moderate, pupil vertically elliptic; rostral large, four-sided, projecting, concave inferiorly; nostril an oblique slit between two nasals. Body elongate, cylindrical; scales smooth or feebly keeled, without apical pits, in 19 rows; ventrals obtusely angulate laterally. Tail moderate or short; subcaudals in two rows.

North Africa and Asia, from the Algerian Sahara to Syria, Transcaspia, Afghanistan, and Sind; Arizona and Lower California.

#### *Synopsis of the Species.*

- I. Internasals forming a suture behind the rostral; two pairs of chin-shields.

End of snout truncate; a pair of præfrontals; two labials entering the eye ..	1. <i>diadema</i> , p. 415.
Snout pointed; a single præfrontal; no labial entering the eye .....	2. <i>ridgewayi</i> , p. 415.
Snout pointed; a pair of præfrontals; one labial entering the eye .....	3. <i>paradoxus</i> , p. 416.

II. Rostral shield separating the internasals; one pair of chin-shields; no labial entering the eye.

Scales smooth .....	4. <i>decurtatus</i> , p. 417.
Scales keeled .....	5. <i>brownii</i> , p. 417.

### 1. *Lytorhynchus diadema*.

*Heterodon diadema*, *Dum. & Bibr. vii. p. 779* (1854); *Gervais, Mém. Ac. Montpellier, iii. 1857, p. 511, pl. v. fig. 1.*

*Simotes diadema*, *Günth. Cat. p. 20* (1858); *Strauch, Erp. Alg. p. 53* (1862); *Boettg. Ber. Senck. Ges. 1878-9, p. 61.*

*Lytorhynchus diadema*, *Peters, Mon. Berl. Ac. 1862, p. 272, pl. —. fig. 1*; *Bouleng. Tr. Zool. Soc. xiii. 1891, p. 145.*

*Chatachlein diadema*, *Jan, Arch. Zool. Anat. Phys. ii. 1863, p. 228, and Icon. Gén. 10, pl. vi. fig. 2* (1865).

*Catachlæna diadema*, *Blanf. Proc. Zool. Soc. 1881, p. 678, fig.*

Snout moderately long; rostral angularly bent, with straight horizontal edge, detached on the sides, the portion visible from above as long as its distance from the frontal; no lateral cleft in the rostral; suture between the internasals much shorter than that between the præfrontals; frontal nearly as long as its distance from the end of the snout, slightly shorter than the parietals; a small, squarish loreal; one or two præoculars, with or without a subocular below; two postoculars; temporals 1+2 or 2+3; seven or eight upper labials, fourth, fifth, or fourth and fifth, entering the eye; three lower labials in contact with the anterior chin-shields; posterior chin-shields as long as or a little longer than the anterior, and separated from each other by two series of scales. Scales smooth, in 19 rows. Ventrals 160-188; anal divided; subcaudals 36-46. Pale buff or cream colour above, with a series of large transversely rhomboidal dark spots; a dark median band along the head and nape, sometimes confluent with an interocular transverse band; an oblique dark band from the eye to the angle of the mouth; lower parts uniform white.

Total length 450 millim.; tail 60.

Algerian and Tunisian Sahara, Egypt, Nubia, Arabia, Syria, Persia.

a. ♂ (V. 162; C. 44).	Algeria.	
b. ♂ (V. 165; C. 40).	Pyramids of Gizeh.	Dr. J. Anderson [P.].
c. Yg. (V. 164; C. 42).	Abou-Roash, W. of Cairo.	Dr. J. Anderson [P.].
d. ♀ (V. 182; C. 43).	Muscat, Arabia.	A. S. G. Jayakar, Esq. [P.].
e. ♀ (V. 188; C. 36).	Bushi, S. Persia.	

### 2. *Lytorhynchus ridgewayi*.

*Lytorhynchus ridgewayi*, *Bouleng. Ann. & Mag. N. II. (5) xx. 1887, p. 413*; *Boetty. Zool. Jahrb. iii. 1888, p. 924*; *Bouleng. Tr. Linn. Soc. (2) v. 1889, p. 102, pl. xi. fig. 1.*



Snout moderately long, pointed; rostral with a trace of a short lateral cleft; internasals forming a short median suture; a single præfrontal, twice and a half as broad as long; frontal nearly as long as its distance from the end of the snout, slightly shorter than the parietals; frontal anteriorly nearly twice the greatest width of the supraoculars; two loreals, anterior largest; three præoculars, upper largest and in contact with the frontal; a subocular; two or three postoculars; temporals 2+3 (or 1+3); seven upper labials, none in contact with the eye; four lower labials in contact with the anterior chin-shields; posterior chin-shields smaller than the anterior and separated from each other by two series of scales. Scales smooth, in 19 rows. Ventrals 174-180; anal divided or entire; subcaudals 44-46. Upper parts pale buff, with brown, black-edged symmetrical markings; an anchor-shaped marking on the head, the crescentic portion extending from one angle of the mouth to the other, passing through the eyes and crossing the frontal and præfrontal; the longitudinal branch expands in a large spot on the middle of the parietals and bifurcates on the nape; large transverse spots disposed at regular intervals on the body and tail, and alternating with smaller ones on the flanks; lower parts uniform white.

Total length 425 millim.; tail 70.

Afghanistan and Transcaspia.

a-b. ♂ (V. 174, 174; Chinkilok, Afghanistan. Dr. J. Aitchison [C.].  
C. 46, ?). Afghan Boundary  
Comm. (Types).

### 3. *Lytorhynchus paradoxus*.

*Acontiophis paradoxa*, Günth. *Proc. Zool. Soc.* 1875, p. 232, fig.;  
*Murray, Ann. & Mag. N. H.* (5) xiv. 1884, p. 110.

*Lytorhynchus paradoxus*, *Bouleng. Faun. Ind., Rept.* p. 323, fig.  
(1890).

Snout long and acutely pointed; rostral with a lateral cleft; suture between the internasals shorter than that between the præfrontals and shorter than the upper part of the rostral; frontal as broad as long, nearly as long as its distance from the end of the snout, as long as the parietals; supraocular narrow; a small loreal; three præoculars; two postoculars; temporals 2+2 or 2+3; eight upper labials, fifth entering the eye; four lower labials in contact with the anterior chin-shields, which are shorter but much broader than the posterior. Scales smooth, in 19 rows. Ventrals 169-175; anal divided; subcaudals 40-53. Cream-colour above, with a dorsal series of transverse brown spots and a less distinct lateral series of smaller spots on each side; a large rhomboidal brown spot on the back of the head, and a brown streak behind the eye; lower parts white.

Total length 370 millim.; tail 60.

Sind.

a. ♂ (V. 169; C. 40). N. India. T. C. Jerdon, Esq. [P.].  
(Type.)  
b. ♀ (V. 175; C. 53). Zangipur, Sind. J. A. Murray, Esq. [P.].

4. *Lytorhynchus decurtatus*.

*Phimothyra decurtata*, Cope, *Proc. Ac. Philad.* 1863, p. 310.

*Salvadora decurtata*, Garm. *N. Am. Rept.* p. 39 (1883).

*Phyllorhynchus decurtatus*, Stejneger, *Proc. U.S. Nat. Mus.* xiii. 1890, p. 154.

Head short and somewhat arched; rostral angularly bent, with straight horizontal edge, detached on the sides, the upper portion triangular and completely separating the internasals; frontal longer than broad; two or three superposed loreals; three præ- and three postoculars; eye separated from the labials by suboculars; two anterior temporals; six upper labials; a single pair of chin-shields. Scales smooth, in 19 rows. Ventrals 172-177; anal entire; subcaudals 26-27. Light grey above; a dorsal series of about thirty parallelogrammic brown blotches; a lateral series of small spots; labials and lower parts uniform white.

Total length 350 millim.; tail 29.

Lower California.

5. *Lytorhynchus brownii*.

*Phyllorhynchus browni*, Stejneger, *Proc. U.S. Nat. Mus.* xiii. 1890, p. 152, fig.

Snout moderately long; rostral angularly bent, with straight horizontal edge, detached on the sides, the upper portion triangular and completely separating the internasals; frontal a little longer than broad, as long as the parietals; three superposed loreals; three præ- and four postoculars; eye separated from the labials by suboculars; temporals small, scale-like; six upper labials; a single pair of chin-shields. Scales in 19 rows, on the anterior third of the body nearly smooth, but becoming gradually more distinctly keeled posteriorly. Ventrals 159; anal entire; subcaudals 31. Whitish above, with about fifteen saddle-shaped brownish blotches on back and tail; no lateral spots; a dark transverse line on the head, passing through the eyes and across the interorbital region; lower surface uniform white.

Total length 325 millim.; tail 42.

Arizona.

## ADDENDA AND CORRIGENDA.

—♦—  
Page 19. *Typhlops jerdoni*.

For "præocular in contact with the second and third labials,"  
read "præocular in contact with the third labial."

Page 22. *Typhlops vermicularis*.

Add:—

x. Ad. Serahs, Transcaspia. J. Barey, Esq. [P.]  
This specimen measures 310 millim.

Page 78. *Liasis childreni*.

Add:—

l-m. ♀ (Sc. 43; V. 250; Baudin Is., N.W. J. J. Walker, Esq.  
C. 46) & yg. (Sc. 43; Australia. [P.]  
V. 243; C. 44).

Page 88. *Python molurus*.

Add:—

f. ♀ (Sc. 67; V. 255; Hoi-How, Hainan. J. Neumann, Esq.  
C. 61). [P.]

Page 201. *Tropidonotus leptcephalus*.

I am much inclined to refer the Snake recently described as *Eutænia brachystoma*, Cope, Am. Nat. 1892, p. 964, fig., to this species; and would have done so without further hesitation were the type specimen not stated to be from Pennsylvania. Perhaps the locality is wrong, or the specimen may have been introduced by man. Eight is the usual number of sublabials in *T. leptcephalus*.

Page 214. Add a species:—

7 a. *Tropidonotus præocularis*.

*Eutænia præocularis*, Bocourt, *Le Natur*. 1892, p. 278.

Habit rather stout. Head rather depressed. Rostral broader than deep; internasals as long as the præfrontals; frontal a little shorter than the parietals; loreal trapezoid; three præ- and three postoculars; a single anterior temporal; eight upper labials, fourth and fifth entering the eye. Scales in 19 rows, keeled. Ventrals 140; anal entire; subcaudals 68-74. Brown above, with a yellow vertebral stripe; sides of neck with five or six vertical black bars, followed on the body by three series of small spots; præ- and post-

oculars yellow; upper lip yellow, with black bars; lower parts yellowish, with a black dot at the outer end of each ventral.

Total length 342 millim.; tail 82.

Belize, Honduras.

Page 220. *Tropidonotus natrix*.

Add:—

- z-a. ♀ (V. 174; C. ?) Kamenetz, Podolia. St. Petersburg Mus. [E.]  
& yg. (V. 178; C. 72).  
β-γ. Yg. (V. 175, 178; Colonia Franzfeld, St. Petersburg Mus. [E.]  
C. 69, 57). S. of Odessa.  
δ. Yg. (V. 164; C. 63). Sukum Kaleh, Cau- St. Petersburg Mus. [E.]  
casus.  
ε. Yg. (V. 174; C. 72). Elizabethpol, Trans- St. Petersburg Mus. [E.]  
caucasia.

Add:—

Page 221. *C. (C. persa.)*

- m. ♀ (V. 181; C. ?). Areshski, Gov. Eliza- St. Petersburg Mus. [E.]  
bethpol, Transcaucasia.

Add:—

Page 239. *Tropidonotus septemvittatus*.

- h. ♀ (V. 147; C. ?) Clear Creek, Monroe Co., Prof. Eigenmann  
Indiana. [C.]  
i. Yg. (V. 147; C. 81). Richmond, Indiana. Prof. Eigenmann  
[C.]

Add:—

Page 286. *Ischnognathus kirtlandii*.

- c. ♀ (V. 133; C. 50). Indiana. Prof. Eigenmann [C.]

Page 301. Add a new genus:—

25 a. **TRIRHINOPHOLIS.**

Maxillary moderately elongate, with 20 small, equal teeth; mandibular teeth equal. Head not distinct from neck; eye moderate, with round pupil; nostril pierced between two nasals and the first labial. Body short, cylindrical; scales smooth, without pits, disposed obliquely, in 15 rows; ventrals rounded. Tail short; subcaudals in two rows. Hypapophyses developed throughout the vertebral column.

Mountains of Burma.

Allied to *Plagiopholis*, from which it is distinguished by the longer maxillary, the presence of a loreal, and the position of the nostril.

1. *Trirhinopholis nuchalis*. (PLATE XXVIII. fig. 1.)

Snout short. Rostral nearly twice as broad as deep, just visible from above; internasals much broader than long, much shorter than



the præfrontals; frontal hexagonal, once and two thirds as long as broad, much longer than its distance from the end of the snout, as long as the parietals; loreal nearly as deep as long; one præ- and two postoculars; temporals 1+2; six upper labials, third and fourth entering the eye, fifth very large; anterior chin-shields a little longer than the posterior, in contact with the symphysial and three lower labials. Scales in 15 rows. Ventrals 122; anal entire; subcaudals 24. Dark purplish brown above, some of the scales edged with black; a black arrow-headed marking on the nape, the apex on the parietals; labials yellowish, with black sutures; belly yellowish, with large black spots.

Total length 340 millim.; tail 40.

Mountains of Burma.

a. ♀ (V. 122; C. 24). Toungyi, S. Shan States. E. W. Oates, Esq.  
[P.]

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 3. — *jacksoni*, Blgr., p. 340. Upper and side views of head and anterior portion of body.

## PLATE XXII.

- Fig. 1. *Lycophidium abyssinicum*, Blgr., p. 342. Upper, lower, and side views of head and anterior portion of body.  
 2. — *fasciatum*, Gthr., p. 342. Upper and side views of head and anterior portion of body.  
 3. — *elapoides*, Gthr., p. 343. Upper and side views of head and anterior portion of body.  
*a.* Upper view of head; *b.* Side view of head,  $\times 2\frac{1}{2}$ .

## PLATE XXIII.

Fig. 1. *Gonionotophis grantii*, Gthr., p. 324.

2. *Simocephalus nyassæ*, Gthr., p. 347.

Upper, lower, and side views of head and anterior portion of body. a. Side view of head,  $\times 2$ .

## PLATE XXIV.

Fig. 1. *Lycodon anamallensis*, Gthr., p. 351.

2. — *laoensis*, Gthr., p. 354.

3. — *travancoricus*, Bedd., p. 355.

Upper and side views of head and anterior portion of body.

## PLATE XXV.

Fig. 1. *Stegonotus heterurus*, Blgr., p. 367. Upper view of head and anterior portion of body and lower view of tail.  
a. Side view of head.

2. *Dryocalamus gracilis*, Gthr., p. 371. Upper and side views of head and anterior portion of body. a. Side view of head,  $\times 1\frac{1}{2}$ .

3. — *tristriatus*, Gthr., p. 372. Upper and side views of head and anterior portion of body. a. Side view of head,  $\times 1\frac{1}{2}$ .

## PLATE XXVI.

Fig. 1. *Zaocys dhumnales*, Cant., p. 375.

2. — *luzonensis*, Gthr., p. 377.

Upper and side views of head and anterior portion of body.

## PLATE XXVII.

Fig. 1. *Zaocys carinatus*, Gthr., p. 377.

2. — *fuscus*, Gthr., p. 378.

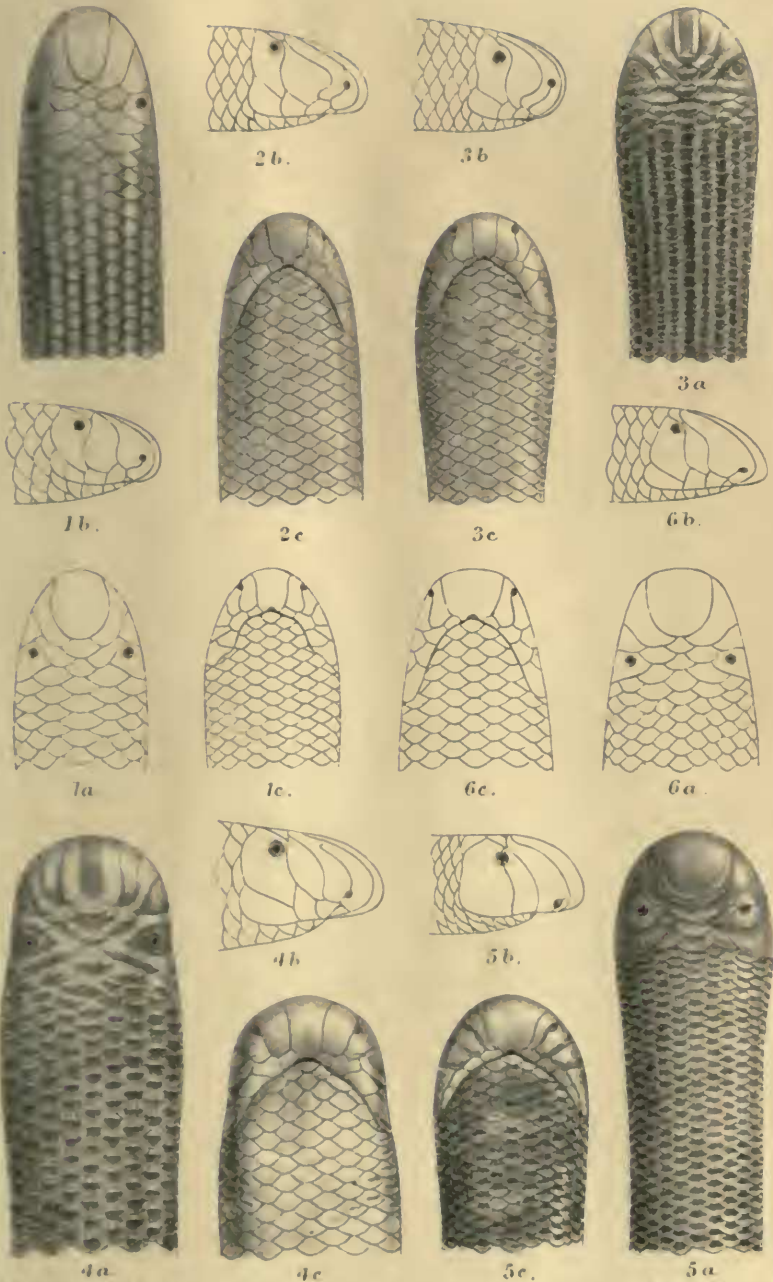
Upper and side views of head and anterior portion of body.



## PLATE XXVIII.

- Fig. 1. *Trirhinopholis nuchalis*, Blgr., p. 419. Upper, lower, and side views of head and anterior portion of body.
2. *Zamenis arenarius*, Blgr., p. 413. Upper and side views of head and anterior portion of body.

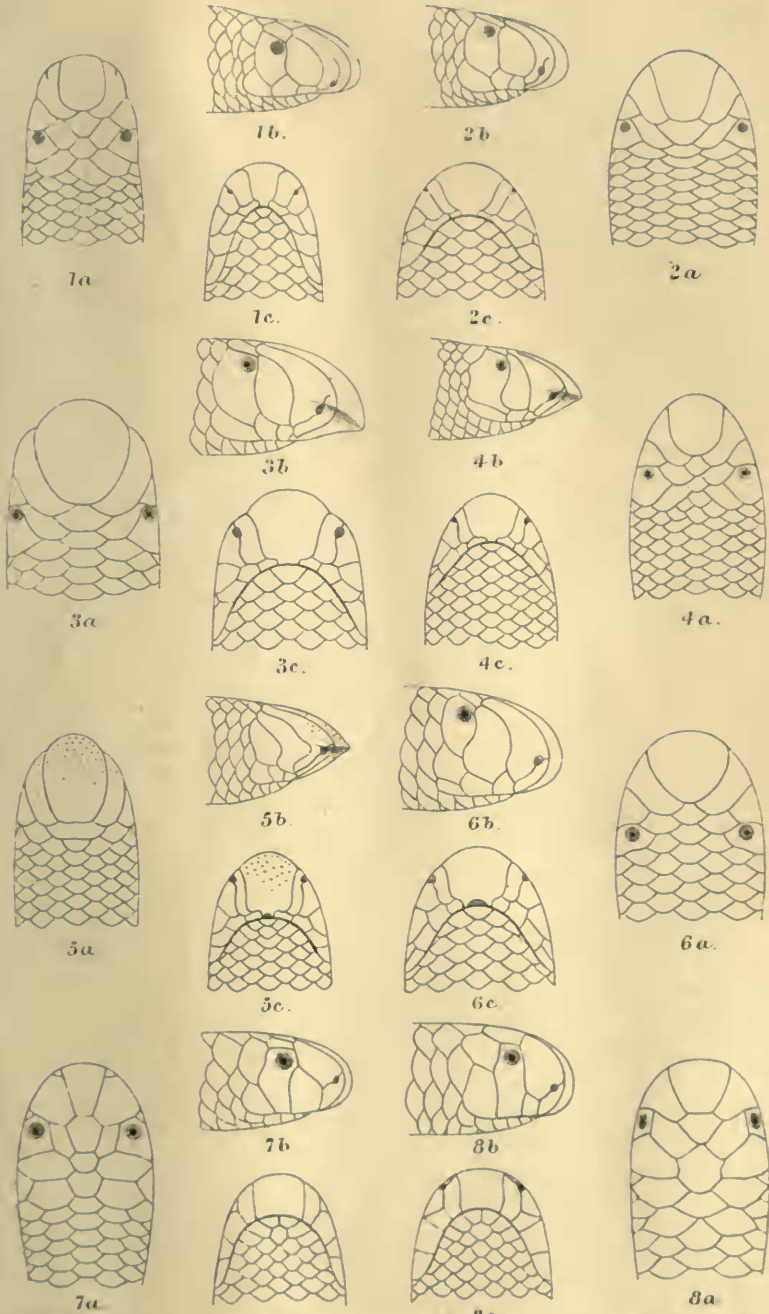




A. Meyer & J. G. del. et lith.

Münch. Bros. imp.

1. *Typhlops comerenis* 2. *Typhlops socotranus*. 3. *Typhlops catesii*.  
 4. *Typhlops torresianus* 5. *Typhlops blanfordii*. 6. *Typhlops boettgeri*.

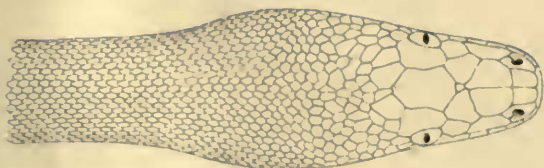


Green del et lith.

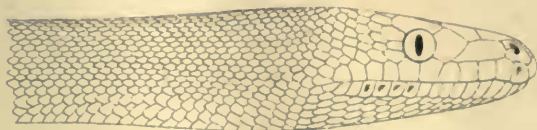
Mintern, Bros. imp.

1. *Typhlops reginae*. 2. *Typhlops exocoeti*. 3. *Typhlops affinis*.  
 4. *Typhlops cunningii*. 5. *Typhlops inornatus*.  
 7. *Glauconia affinis*. 8. *Glauconia emini*.

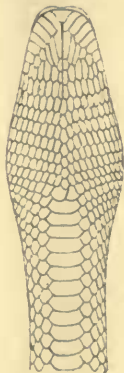




2.



3.



1.

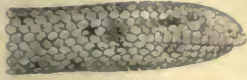


1.

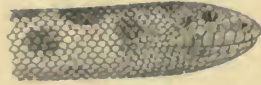
R. Minter & J. G. del et lith.

Minter Bros. imp.

1. *Liasis childreni*. 2. *Liasis olivaceus*. 3. *Corallus cockii*.



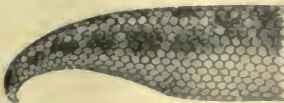
1



2



3.



3.



2.

1. *Eryx elegans* 2. *Eryx muelleri*. 3. *Eryx jayakuri*.

1.



1c.

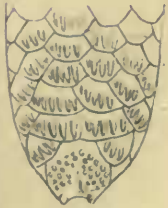


1a.



1b.

2.



3b.



3a.

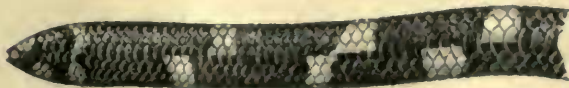


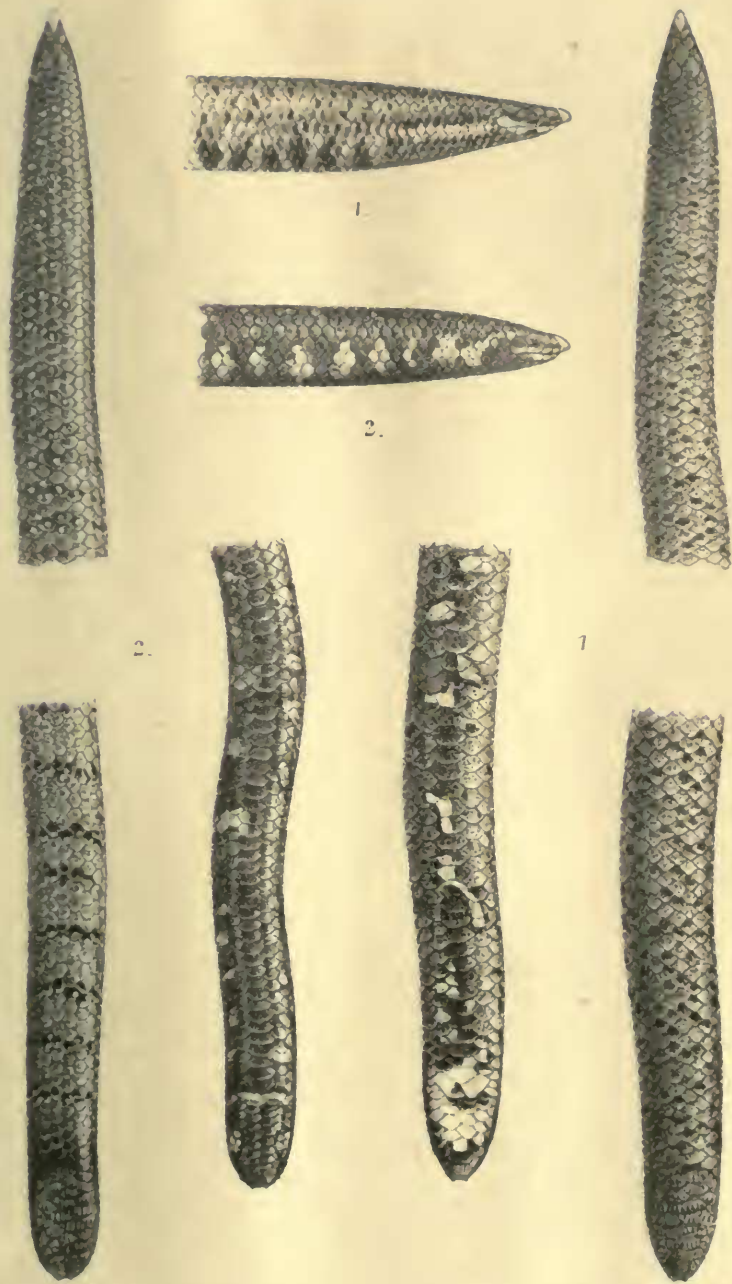
2b.



2a.

3.





Mintern, & J. S. del. et lit.

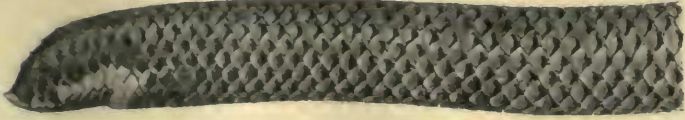
Mintern. Broc imp.

1. *Silybura dindigalensis*. 2. *Silybura broughami*.

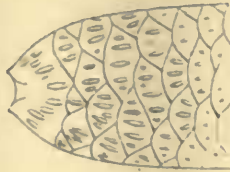




1.



1a.



1b.



2b.



2a.



2





3.



3a



3b



2a



2b



2.



1



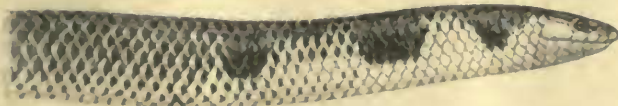
1.



2



1.





2.



1a.



3a.



2a.



3.



3.



1.



1.





2



1



1a.



2a



1b



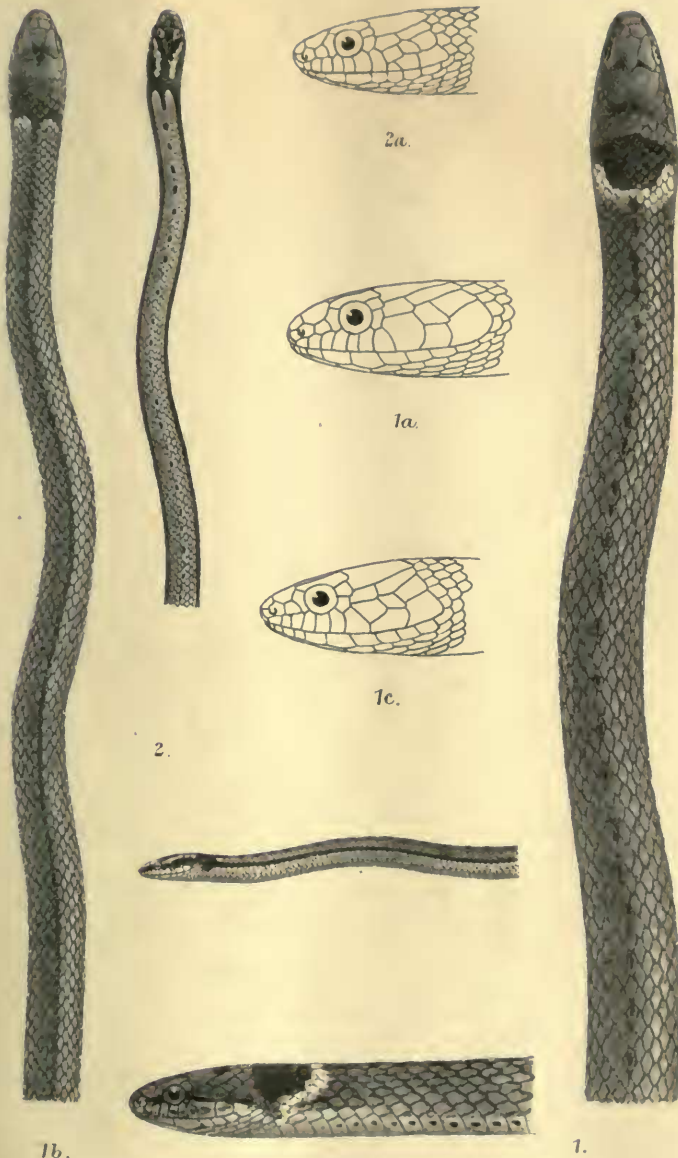
1c



1.





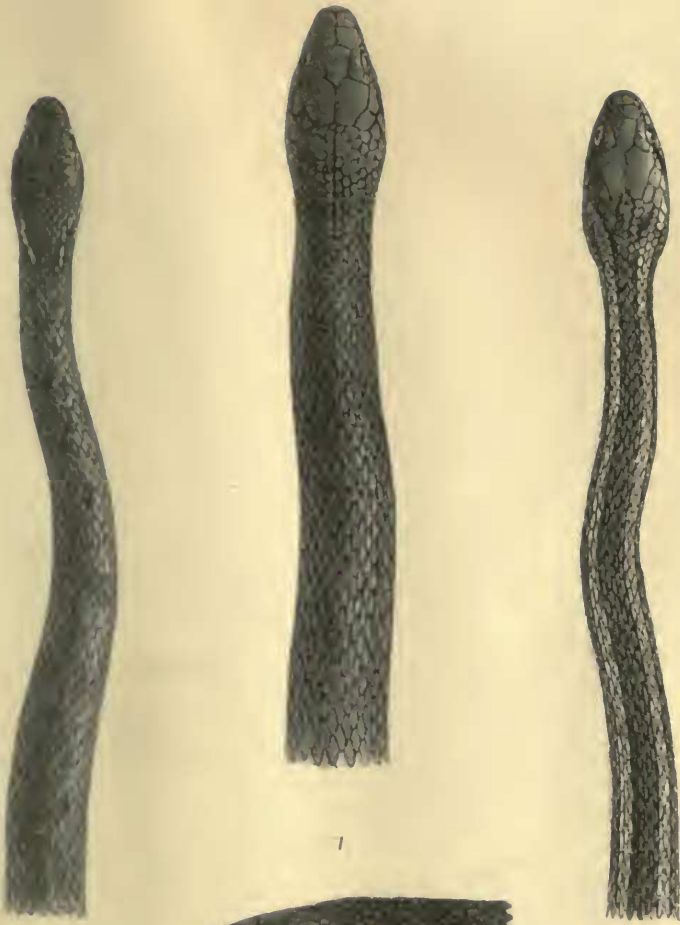


Desat. del. et lith.

Mintern. Broc. imp.

1. *Polyodontophis collaris*.

2. *Polyodontophis bistrigatus*.



3.

2.



W. B. S. et al. del.

Muntern Bros. imp.

1. *Tropidonotus nichalis*. 2. *Tropidonotus parallelus*. 3. *Tropidonotus khasiensis*.



1

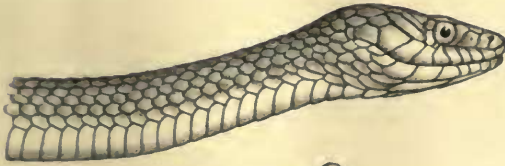
2

3



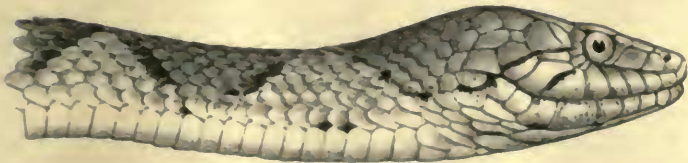


1.

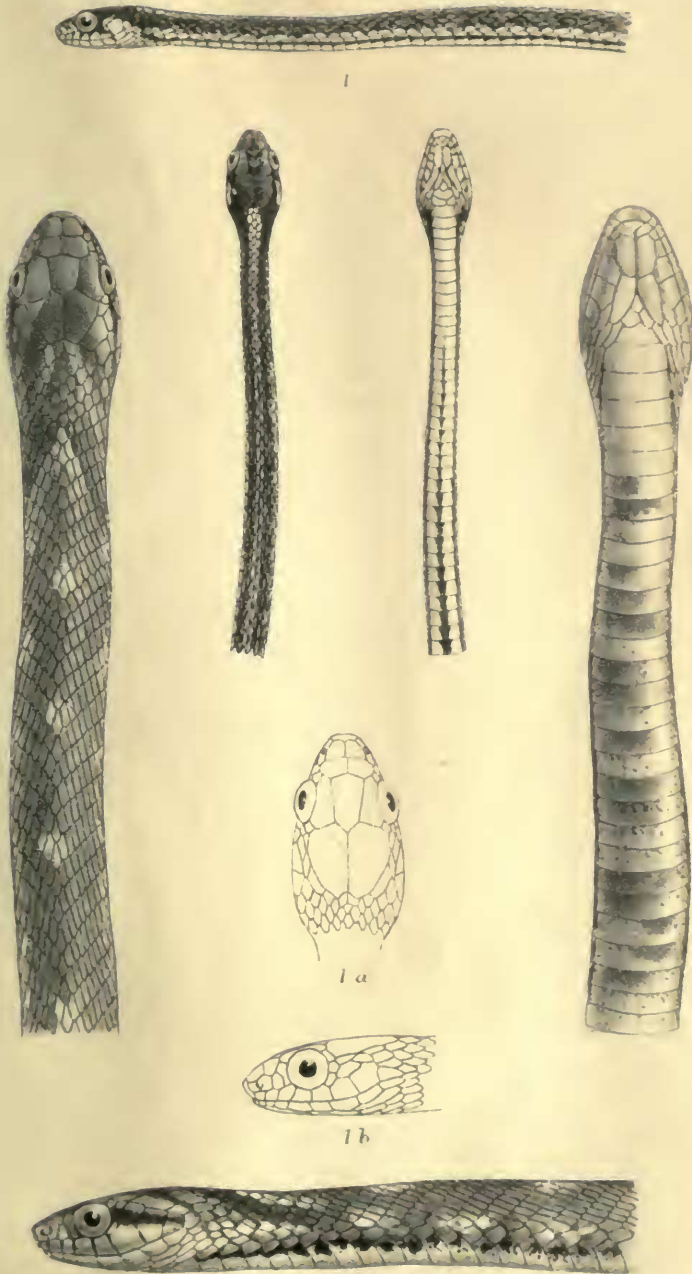


1a.

2.







1

1 a

1 b

2

P. Smut del et lit.

Mintem. Bros imp

1. *Trepilonotus auricularis*.

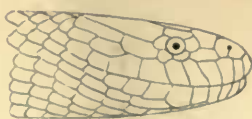
2. *Pseudacnodon dorsalis*.



3.



3a.



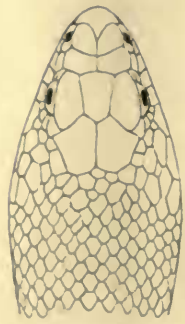
3b.



3c.



1.



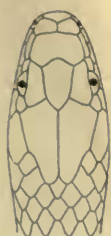
2.



M. Miers & J. S. G. del. et lit.

M. Miers Bro. imp.

1. *Echis colubrinus modestus*. 2. *Helicops trivittatus*. 3. *Opiathotropis anderssonii*.



1a.



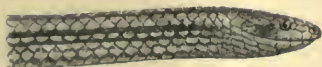
1b.



4a.



4b.



1.



2.



3.



3a.



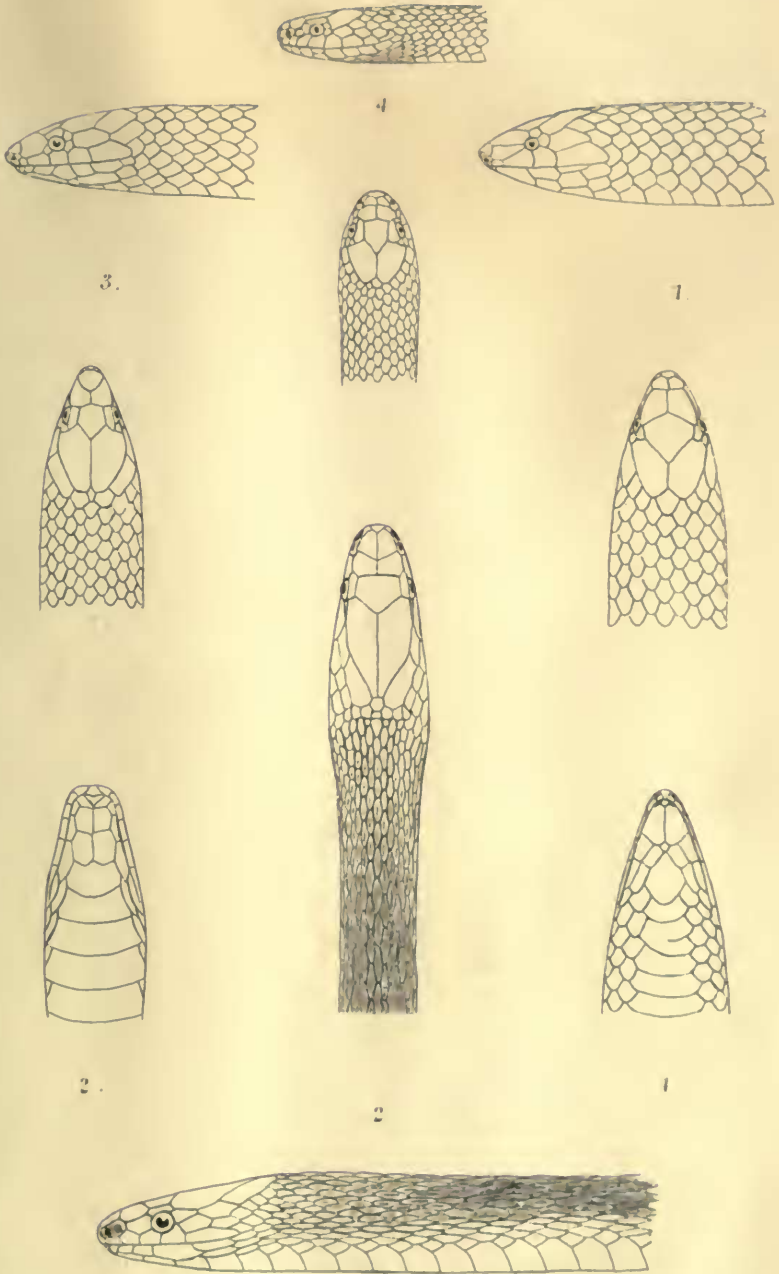
2a.



3b.



2b.



P Smit del et lith.

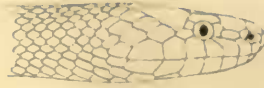
Mintern Bros. imp

1. *Xylophis stenorhynchus*. 2. *Achalinus rufescens*.  
 3. *Aspidura guentheri*. 4. *Lamprophis fuscus*.





1



1



2a



2b

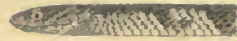


3.



2.





2.

1.

3



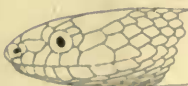
2a.



1a



3a



2b



1b



3b

P Smut del et lith

Mintern Bros imp

1. *Lycephidium abyssinicum*. 2. *Lycephidium fasciatum*.  
3. *Lycephidium elapoides*.



1.



1a.



2a.



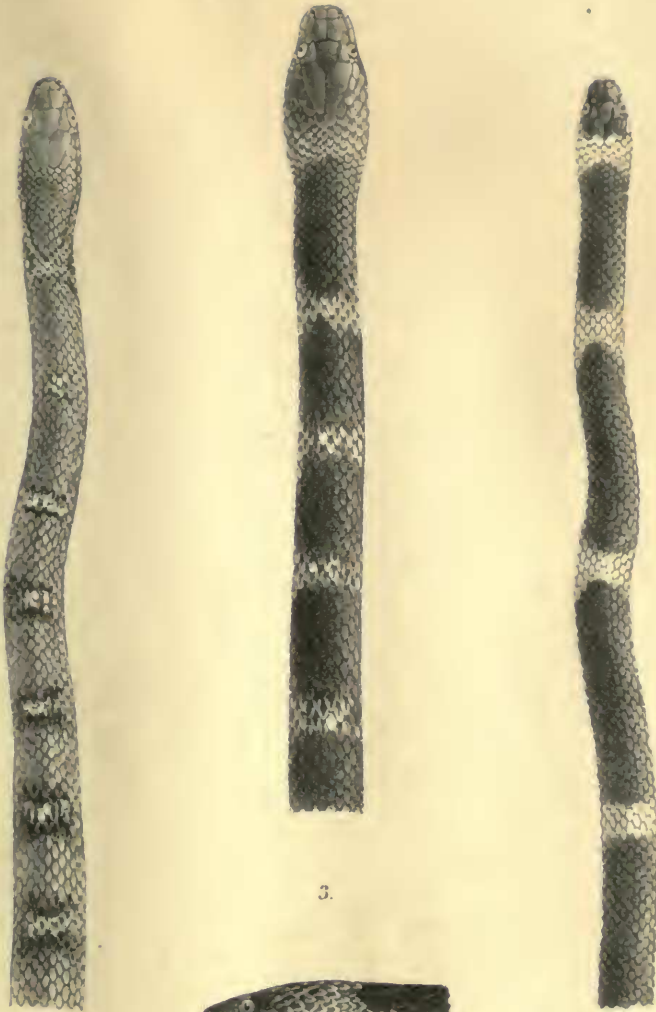
1.



2.



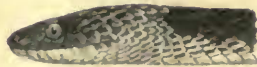
2.



1

3

2



P. Smit del. et lith.

Mintern. Bros. imp.

1. *Lycodon anamallensis*.    2. *Lycodon laevis*.  
 3. *Lycodon travancoricus*.





1a.



2a.



3a.



1.



2.



3.



2.



3.

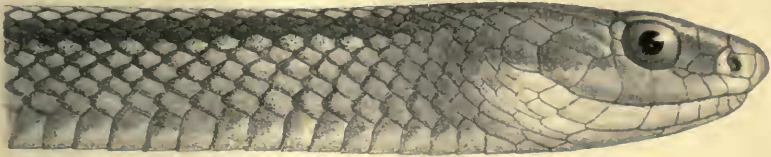
R. Minton & J. G. del. et lith.

Minton Bros. imp

- 1. *Stegonotus heterurus.*
- 2. *Dryocalamus gracilis.*
- 3. *Dryocalamus tristriatus.*

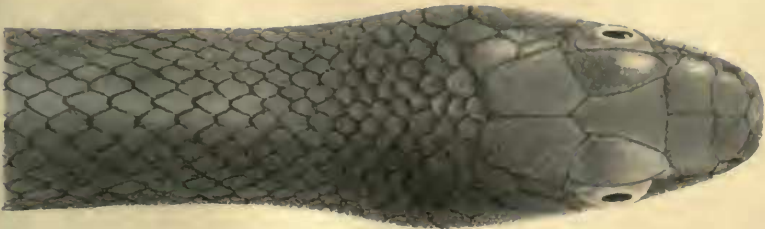


1.

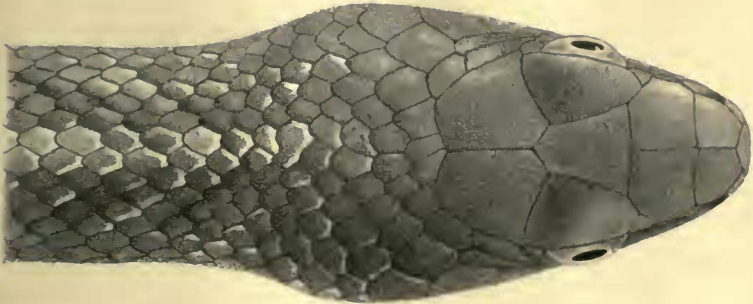
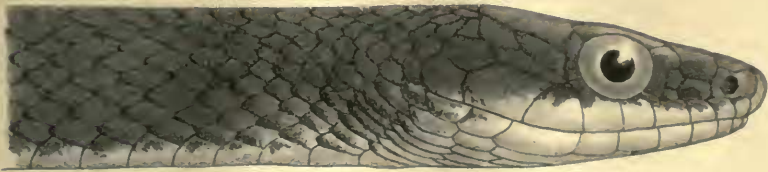


2.

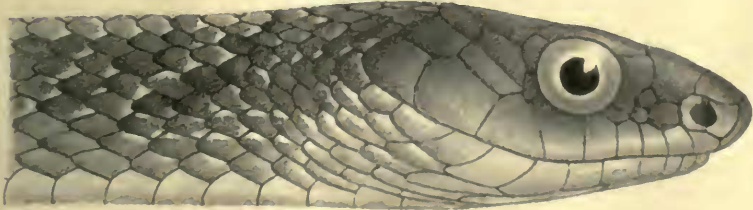




2.



1.



P Smit del et lith.

Mintern Bros imp

1. *Zaocys carinatus*.

2. *Zaocys fuscus*.



1



2



1. *Trirhinepholis nuchalis*. 2. *Zamenis arenarius*.